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USSR Report

ECONOMIC AFFAIRS

No. 1036

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Moscow IZVESTIYA AKADEMII NAUK SSR. SERIYA EKONOMICHESKAYA in Russian No 5, Sep-Oct 82 pp 5-8

[Decree: "Decree of the Annual General Meeting of the Economics Department of the USSR Academy of Sciences on 1 March 1982"]

[Text] The annual general meeting of the Economics Department of the USSR Academy of Sciences notes that during the report period the institutions of the Economics Department of the USSR Academy of Sciences began their scientific and science-organizational activities from the tasks of further increasing the efficiency of scientific research and fitting this research within practical building of communism, as follows from the resolutions of the 26th CPSU Congress and the November 1981 Plenum of the CPSU Central Committee, guided by the principles and conclusions presented in the statements of Comrade L. I. Brezhnev and by the document "Fundamental Directions of Work of the Economics Department of the USSR Academy of Sciences Toward Development of Economic Science in Light of the Resolutions of the 26th CPSU Congress," which was adopted by the general meeting of the Economics Department of the USSR Academy of Sciences.

Special attention was concentrated on further development of the theory and practice of the economy of developed socialism, broadening and deepening research on problems of refining production relations, raising production efficiency, and the theory and methodology of managing the socialist economy.

There have been certain successes in studying timely problems of world economics and international relations, the world revolutionary process, the current phase of the exacerbation of the general crisis of capitalism, the struggle, competition and peaceful co-existence of states with different social systems, the growing role of the liberated countries, and global, common human problems of world development.

In the first year of the new five-year plan the scientific collectives of economic institutions of the Economics Department intensified their attention to raising the efficiency of scientific research and stepping up the introduction of research results in practice.

Work on the Comprehensive Program of Scientific-Technical Progress for 20 Years (by five-year plans) has begun. A draft of a short version of the ideas of the summary section "Scientific-Technical Progress and Fundamental Problems of Socioeconomic Development of the USSR" for the document "Fundamental Features of the Conception of Economic and Social Development of the USSR until the Year 2005" has been prepared.

Scientists of the Economics Division have done a great deal on development and realization of the USSR Food Program for 1981-1985 and the period until 1990.

There has been continued study of the current problems of practical building of socialism in the socialist countries and also of the new phenomena and trends in the world capitalist economy and the socioeconomic problems of the developing countries.

The USSR Academy of Sciences, State Committee for Science and Technology, and USSR Gosplan have ratified the document "Key Economic Problems," which was prepared by the Economics Department and is the fifth chapter of the plan of scientific research in the natural and social sciences for 1981-1985. It contains promising lines of research in economics.

A number of monographs have been published, including the following:

1. "Voprosy Intensifikatsii i Sbalansirovannosti Rasshirennogo Vosproizvodstva v Period Razvitogo Sotsializma" [Issues of Intensification and Balance of Expanded Reproduction in the Period of Developed Socialism] (edited by corresponding member of the USSR Academy of Sciences A. I. Notkin);

2. "Problemy Effektivnosti Struktury Narodnogo Khozyaystva SSSR v Period Razvitogo Sotsializma" [Problems of the Efficiency of the Structure of the USSR National Economy in the Period of Developed Socialism] (edited by doctor of economic sciences N. A. Shokin);

3. the seventh volume of the seven-volume work on the history of the Soviet economy "Ekonomika SSSR na Etape Razvitogo Sotsializma (1960-1970 gg.)" [The USSR Economy in the Stage of Developed Socialism (1960-1970)] (edited by doctor of economic sciences I. A. Gladkov);

4. "Strukturnyye Izmeneniya v Sotsialisticheskoy Ekonomike" [Structural Changes in the Socialist Economy] (by doctor of economic sciences Yu. V. Yaremenko];

5. "Problemy Sovershenstvovaniya Khozyaystvennogo Mekhanizma: Ekonomicheskiye Metody Povsheniya Effektivnosti Proizvodstva" [Problems of Refining the Economic Mechanism: Economic Methods of Raising Production Efficiency] (by doctor of economic sciences V. A. Volkonskiy);

6. "Global'nyye Ekonomicheskiye Modeli" [Global Economic Models] (by doctor of economic sciences V. S. Dadayan);

7. "Modeli Programmo-Tselevogo Upravleniya (na Primere Programm Nauchno-Tekhnicheskogo Razvitiya) [Models of Management by Target Programs (Using the Example of Programs for Scientific-Technical Development)] by doctor of economic sciences N. I. Komkov);

8. "Mezhdunarodnoye Rabocheye Dvizheniye. Voprosy Istorii i Teorii" [The International Worker Movement. Issues of History and Theory], volume 6 of "Rabocheye Dvizheniye v Razvitykh Kapitalisticheskikh Stranakh posle Vtoroy Mirovoy Voyny (1945-1979)" [The Worker Movement in the Developed Capitalist Countries after World War II (1945-1979)], (edited by academician N. N. Inozemtsev);

9. "Problemy Voyennoy Razryadki" [Problems of Military Detente] (edited by doctor of historical sciences A. D. Nikonov);

10. "Global'nyye Problemy Sovremennosti" [Global Problems of the Present Day] (edited by academician N. N. Inozemtsev);

11. "Sotsialisticheskaya Integratsiya i Nauchno-Tekhnicheskaya Revolyutsiya [Socialist Integration and the Scientific-Technical Revolution] (by doctor of economic sciences A. N. Bykov and candidate of economic sciences D. A. Lebin);

12. "SShA i Razvivayushchiyesya Strany v 70-e Gody" [The USA and the Developing Countries in the 1970's] (edited by doctor of historical sciences B. P. Lukin);

13. "Vneshnyaya Politika Stran Afriki" [The Foreign Policy of the Countries of Africa] (edited by corresponding member of the USSR Academy of Sciences A. A. Gromyko);

14. "Promyshlennoye Razvitiye Stran Latinskoy Ameriki v Usloviyakh NTR" [The Industrial Development of the Latin American Countries under Conditions of the Scientific-Technical Revolution] (edited by doctor of economic sciences I. K. Sheremet'yev);

15. "Noveyshaya Istoriya Kitaya" [Recent Chinese History], volumes 1 and 2 (edited by corresponding member of the USSR Academy of Sciences M. I. Sladkovskiy).

The institutes of the Economics Department of the USSR Academy of Sciences prepared a number of major monograph studies for publication, including the following:

1. "Ekonomicheskiy Stroy Sotsializma" [The Economic Order of Socialism] in three volumes (edited by corresponding member of the USSR Academy of Sciences Ye. M. Kapustin);

2. Eight volumes of the 10-volume series of monographs on development of the system of optimal functioning of the socialist economy (edited by academician of the USSR Academy of Sciences N. P. Fedorenko);

3. "Mirovoy Sotsializm: Problemy Razvitiya" [World Socialism; Problems of Development], two volumes (edited by academician of the USSR Academy of Sciences O. T. Bogomolov).

After hearing and discussing the accountability report of academician of the USSR Academy of Sciences N. P. Fedorenko, secretary-academician of the Economics Division of the USSR Academy of Sciences, the annual general meeting of the Economics Division decrees as follows.

1. The results of scientific research work by economics institutions and the science organizational activities of the Economics Department of the USSR Academy of Sciences in 1981 are approved.

2. Realization of the resolutions of the 26th party congress and Plenums of the CPSU Central Committee, as well as the tasks posed in statements of L. I. Brezhnev should be considered the paramount task of scientific institutions of the Department. In their activity they should be guided by the document "Fundamental Directions of Work by the Economics Department of the USSR Academy of Sciences To Develop Economic Science in Light of the Resolutions of the 26th CPSU Congress."

3. Fulfillment of the five-year plan of scientific research is the primary task for scientific organizations of the Department.

4. Efforts must be concentrated on investigating the problems of political economy; theoretical problems of the efficiency and intensification of public production; the content and structure of the unified national economic complex of the country; development of the entire complex of relationships of socialist ownership in the phase of developed socialism, the patterns governing refinements of socialist production relations, and the concrete forms of this process; the path to building the material-technical base of communism; socioeconomic problems of the scientific-technical revolution ; changes in the content and nature of labor; the theoretical foundations of the system of planned price formation; practical recommendations on improving distribution relationships under conditions of a mature socialist society; preparation of practical recommendations on qualitative improvement of distribution relations and bolstering material and moral incentives to labor ; socialist integration of the world economy and international relations.

5. There should be further studies of the theoretical and practical problems of optimal functioning of the socialist economy, the set of mathematical economic models for current and long-range national economic planning, the theoretical problems of refining the economic mechanism of developed socialist society and strengthening its influence on raising production efficiency and work quality, and the problems of measuring the efficiency of economic measures and the methodology of evaluating them.

6. The scientific institutions of the Department should concentrate their efforts on continuing to work out the most important socioeconomic programs:

- the economic problems of developed socialism and the patterns of its growth into communism (director is corresponding member of the USSR Academy of Sciences Ye. I. Kapustin);
- development of the theory and methods of planning and managing the socialist economy (director academician N. P. Fedorenko);
- regional economics and the regional socioeconomic development of the USSR until the year 2000, and formation and development of large national economic complexes (director academician N. N. Nekrasov);
- the patterns of development of the world socialist economy, the problems of socialist economic integration and development of the USSR's long-term economic ties with the socialist countries (director academician O. T. Bogomolov);
- the patterns and trends in development of the economy of the capitalist and developing countries and the world capitalist economy, and the problems of the USSR's foreign economic links with these countries (director academician N. N. Inozemtsev);
- the theoretical problems of production efficiency and intensification (director is corresponding member of the USSR Academy of Sciences Ye. I. Kapustin).

7. Work should be continued on development and realization of the socioeconomic sections of the Comprehensive Program in conformity with the 26 June 1981 decree of the Presidium of the USSR Academy of Sciences, the State Committee for Science and Technology, and USSR Gostroy entitled "Organizing Development of the USSR Comprehensive Program of Scientific-Technical Progress for the Next 20 Years by Five-Year Plans," guided by calendar dates for turning over the principal stages of the Comprehensive Program determined by the State Plan of scientific research in the natural and social sciences for 1981-1985 entitled "Key Economic Problems."

8. Research on development of the Food Program must be continued.

9. In the field of study of the world socialist system special attention should be given to comprehensive analysis of the processes taking place in the individual socialist countries, with systematic study of the economic, political, and ideological problems of improving socialist economic integration in the current phase, scientific generalization of useful know-how in organizing production and management, realization of social problems, and refinement of agrarian policy.

10. Scientific work on timely problems of world economics, international relations, and the world revolutionary process should be continued and deepened with special attention to investigation of the problems of preventive nuclear war, harnessing the arms race, preserving and furthering detente in the development of international cooperation, the interaction of centrifugal and centripital tendencies within the imperialist system, the mutual relations of imperialism with the developing countries, the growth in the activism of the liberated countries, social and political differentiation in the developing world, and approaches to solving global problems.

Institutes involved in international studies should continue and broaden their participation and work on the problems of scientific-technical progress and in preparation of the Food Program.

11. Research should be activated on the problems of the development and consolidation of economic cooperation between the USSR and the countries with socialist orientations, along with preparation of forecasts of the principal trends of scientific-technical and economic development in the countries of Asia, Africa, and Latin America.

12. We must intensify the ideological indoctrination effectiveness of studies that are conducted, provide well-supported responses to attempts by bourgeois scientists to discredit actual socialism and its achievements, expose and scientifically refute the many recent "theories" that juxtapose real socialism and the scientific-technical revolution, deny the possibility of building the material-technical base of communism and give a false picture of the economic mechanism of mature socialism and its paths of development.

13. The Institute of Economics of the USSR Academy of Sciences should conduct a scientific session devoted to the 60th anniversary of the formation of the USSR. The scientific institutions of the Economics Department of the USSR Academy of Sciences should take an active part in its work. The institutes of the Economics Department of the USSR Academy of Sciences should conduct activities dedicated to the state.

14. Coordination of scientific research should be expanded and considered one of the important jobs of the Economics Department and its scientific institutions.

In order to improve coordination of scientific research and science-organizational activity by the Economics Department, it is necessary to participate in the traveling session of the Council on Coordination of Scientific Activity of the Union Republic academies of sciences in Tallinn.

15. The scientific councils of the Economics Department of the USSR Academy of Sciences should strengthen their coordination of the development of the paramount national economic issues. The institutes of the Economics Department of the USSR Academy of Sciences should broaden their scientific cooperation with the economics institutions of the Union Republic academies of sciences and the country's higher educational institution.

The Bureau of the Economics Department of the USSR Academy of Sciences at its coming sessions should review the questions of scientific cooperation and coordination of research with various institutes of the Union republics (Estonia, Latvia, Lithuania, and Belorussia).

For the purpose of giving effective help in realization and coordination of five-year and annual plans of scientific research, we must review the possibility of organizing traveling sessions in the Transcaucasus and Central Asia.

16. The journals of the Economics Department of the USSR Academy of Sciences must direct attention to further raising their scientific level, conducting debates on timely issues, and broadly publicizing materials from the representatives of the Union republic institutes and organizations.

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Session Detailed

Moscow IZVESTIYA AKADEMII NAUK SSR. SERIYA EKONOMICHESKAYA in Russian No 5, Sep-Oct 82 pp 135-139

[Article by A. I. Semenov: "Chronicle of Scientific Life — Annual General Meeting of the Economics Department"]

[Text] The annual general meeting of the Economics Department of the USSR Academy of Sciences was held on 1 March of this year. Academician N. P. Fedorenko, secretary-academician of the Economics Division of the USSR Academy of Sciences, presented the accountability report on results of work by scientific research institutions in 1981 and the tasks of development of economic science. He emphasized that the task posed by the party and Comrade L. I. Brezhnev of basically completing the national economic transition to an intensive footing in the 1980's is a task of historical significance and great complexity that substantially raises requirements for work on the theoretical and applied problems of socialist economic activity. The current state of economic theory, the practices of socialist economic activity, and the requirements of socioeconomic development all create the necessary prerequisites for new generalizations and working out and realizing a comprehensive system of measures to fundamentally improve the efficiency of public production.

He noted that the coming phase of socioeconomic development in the country should be a phase of further consolidation of developed socialist society, development of the Soviet way of life, and full, comprehensive realization of the historical advantages of the socialist method of production. Devising an economic mechanism adequate to socioeconomic relations of a developed socialist society should insure accelerated scientific-technical progress and thus act as the chief source of the country's economic growth.

N. P. Fedorenko emphasized that the 26th CPSU Congress left its imprint on all the activities of economic scientists in the country last year.

In the first place, the collectives of the institutes took part in preparation of the materials for the congress and in discussion of the draft of the document "Basic Directions" of economic and social development of the country for 1981-1985 and the period from 1990.

In the second place, all subsequent work was devoted to carrying out the historical resolutions of the 26th CPSU Congress and the resolutions of the November 1981 Plenum of the CPSU Central Committee.

N. P. Fedorenko noted that the document "Basic Directions of Work of the Economics Department in Development of Economic Science in Light of the Resolutions of the 26th CPSU Congress," which was published in the press, was adopted a year ago. Guided by this document scientists of the Economics Department concentrated their efforts on further development of the economic and social problems of developed socialism, the theory and methodology of managing the socialist economy, and the political and socioeconomic problems of foreign countries. In the first year of the new five-year plan definite progress was made by scientists in all the planned areas.

The secretary-academician pointed out that among the studies made in 1981 in the field of political economy, a special place was given to those topical issues which are directly linked to practice and find reflection in further refinement of national economic management, in particular the questions of the efficiency of public production, scientific-technical progress, and socialist competition. The most significant product of the work of the Institute of Economics in 1981 was completion of preparation of the three-volume work "Ekonomicheskiy Stroy Sotsializma" [The Economic Order of Socialism].

Economic scientists must begin work immediately on an extremely important problem. The 26th party congress noted that it is necessary to make amendments and supplements in the existing Program of the CPSU, prepare a new edition of it, and in it reflect the historical experience of building socialism and communism in the country during the 20 years that have passed since the existing Program was adopted.

N. P. Fedorenko observed that a precise description must be given of the phase of developed socialist society as a necessary, natural, and historically prolonged period in the development of a communist formation. It is necessary to investigate the changes which have taken place in the Soviet economy and refine the long-term objectives and goals of the country's socioeconomic development in the future.

He emphasized that the main tasks in preparation of the new edition of the Program of the CPSU fall on the shoulders of specialists in political economy, which is the theoretical and methodological core of the entire system of economic sciences.

The political economy of socialism should give scientifically substantiated guidelines for purposeful, comprehensive refinement of the entire system of planned national economic management and devising an economic mechanism that insures more efficient use of production, labor, and natural resources and the scientific-technical knowledge of developed socialist society.

The secretary-academician noted that it is necessary to overcome a certain gap between the level of development of our society's productive forces and the nature of established production relations. Productive forces are developing rapidly under the influence of the scientific-technical revolution. But production relations, which are concretely reflected in the sphere of planned management of the social reproductive process by the economic mechanism of management, are still evolving slowly. As a result, some elements of the economic mechanism of management are becoming factors that slow down the process of intensification of public production.

He emphasized that Marxist-Leninist theory does not simply reflect the world of existing economic relations as it is, but serves as a very important factor in purposefully transforming it. Therefore, the political economy of socialism is expected to suggest precisely how the entire system of socialist production relations should be used for more complete realization of the potential historical advantages of socialism.

N. P. Fedorenko observed that developing the theory of ownership relations and studying the forms and relationships of public ownership in their organic unity are very important tasks of political economy.

Investigation of this problem includes theoretical analysis of the processes of collectivization of the material-technical base of production and the development of intersectorial and territorial forms of collectivization: the establishment of conditions for actively involving the members of society in all spheres of its vital activity. But this requires identifying and resolving the fundamental problems and contradictions in development of the processes of collectivization (lack of balance among large, medium-sized, and small enterprises, departmentalism, underdevelopment of collective interests and economic accountability relations, the existence of certain negative trends in shaping the attitude toward labor, and so on).

In connection with this he focused attention on the crucial significance of political economic analysis of the entire system of distribution relationships in the socialist economy. This refers to forming the primary incomes of all agents of public production and the mechanism of their redistribution, in particular formation of the incomes of the members of socialist society and a rational (optimal) ratio of labor incomes and public consumption funds. There must be thorough analysis of the questions of insuring an organic tie between the wages of workers and their contribution to achieving maximum final national economic results, objective limits to wage differentiation, and a socially guaranteed minimum level of goods and services.

N. P. Fedorenko noted that one of the central problems of development of the political economy of socialism is much deeper work on the problem of identifying the criteria of optimal functioning of the socialist economy at all levels (national economy, region, sector, and production associations and enterprises) and constructively reflecting them in the economic mechanism of planning and management. Analysis of this problem directly relates to the issues of the efficiency of public production and the final national economic results of development of the socialist economy as a whole and of its individual elements. This demands clarification of the conditions of organic agreement between national economic interests and the local interest of the individual production elements of socialist society.

In addition, as N. P. Fedorenko pointed out, a very important part is played here by the prices of products and production resources, norms of payments for using them, rent, the interest rate, and the like. Thorough analysis of the principles of formation of price relationships in the socialist economy, substantiating their role in the regime of optimal use of production resources, and correlating with the natural-material structure of the reproductive process — all of these must be subjected to careful political economic study.

There must also be comprehensive, thorough investigation of the nature and role of the category of the public usefulness of goods in the system of economic categories that reflect the aggregate of socialist production relations and its link with the category of socially necessary expenditures. We must overcome the one-sided and incorrect view which holds that introducing the category of the social usefulness of goods into the arsenal of the political economy of socialism contradicts the production-labor approach and analysis of the economic relations of socialism. This is a common task of all scientists working in the field of the development of economic theory.

N. P. Fedorenko observed that during the last year broad studies and scientific experiments were conducted on development of the theoretical and methodological problems of improving the system of planning and managing the socialist economy and the entire economic mechanism.

Scientists at the Central Mathematical Economics Institute of the USSR Academy of Sciences prepared and published the "Methodological Principles on Development of Comprehensive National Economic Programs," and working together with the Main Computer Center of USSR Gosplan, formulated a set of consolidated macromodels and prepared a draft of methodological foundations of sectorial optimization calculations using standardized dynamic models. A software system for optimizing groups of interrelated sectors was turned over to the library of algorithms and programs of the Main Computer Center of USSR Gosplan.

Foremost among the works of the Institute of Economics we should note a series of methodological materials on the efficiency of public production. They were approved by USSR Gosplan and published in the press.

The scientific collective of the Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences prepared proposals on refining and correlating the optimization interregional intersectorial model to the structure of the territorial breakdown of the national economic plan, as well as proposals on refining the system of mathematical economic models of the formation of territorial-production complexes. This collective prepared a draft "Program for Economic Development of the BAM Zone" and recommendations on using the Northern Sea Route to develop the natural wealth of Siberia and the Far East.

Major studies on regional economics were also carried out in economic subdivisions of the Far Eastern and Ural science centers, at branches of the USSR Academy of Sciences, and in the institutes of economics of the Union republic academies of sciences.

Continuing, the secretary-academician discussed the tasks given to economic science by the 26th CPSU Congress and emphasized that special attention was devoted to the development of scientific forecasting of the economy and the system of current, five-year, and long-term plans, to improving the quality and stability of planning, to overcoming departmentalism in deciding national economic issues, and to broadening the independence of associations and enterprises and the rights and accountability of economic managers. The task of consistent implementation of the 12 July 1979 Decree of the party and government concerning refining the economic mechanism was emphasized.

Therefore, economic scientists face the challenges of refining the economic mechanism by carrying out these decrees and studying the experience with introduction of new forms and methods of economic management, and devoting their research to promising, fundamental issues of further development of the economic mechanism.

Considering the timeliness of these directions of research, it is essential to concentrate efforts and intensify work on the key problems of managing socialist economy, those problems which are directly relevant to economic practice.

Among these problems is the problem of measuring expenditures and results in the national economy. Work on this problem both within the framework of the political economy of socialism and on a more concrete level within the framework of the theory of optimal functioning of the economy has rich traditions and traces its roots to fundamental propositions of the Marxist-Leninist theory of socially necessary expenditures.

N. P. Fedorenko particularly stressed that this issue is especially critical in practice today above all because the policy of achieving maximum final national economic results and reorienting the entire system of stimulation and cost accounting to final efficiency demands the development of rigorous, scientifically sound economic measures.

The problem of expenditures and results cannot be considered only in its accounting-statistical aspects. It is above all a problem of rationalizing and optimizing management decisions. Assessment of the real economic impact of a particular economic measure organically precedes adoption of a scientifically sound decision on the directions of distribution of production resources and has a significant influence on shaping investment policy.

The price formation system plays an equally important part in the area of optimizing the mechanism of national economic management.

He emphasized that research has been going for many years at institutes of the Economics Division of the USSR Academy of Sciences on improving the system of price formation and constructing models of the planned price that adequately reflect the requirements of maximizing final national economic results. The current phase of research is characterized first of all by striving for practical realization of the principles of optimal price formation and, secondly, undertaking a program of work to shape a general, early conception of refining the entire system of prices in the national economy applicable to the requirements formulated by the 26th CPSU Congress.

This conception should include, in addition to a general model of the planned price and mechanism of using it in the mechanism of national economic management, development of concrete aspects of price formation that reflects specific characteristics in agriculture (state purchase prices), transportation (rate schedules), the sphere of realization of consumer goods and services (retail prices), and in other areas. Research on issues of shortage of resources and goods in the national economy with preparation of appropriate recommendations on the full set of economic relations is especially urgent. Such large-scale challenges require concentrating scientific personnel and close coordination of the work of all collectives and all science cadres. The success of the broad program of measures outlined by the party and government to refine the system of national economic management depends greatly on how deeply and well these problems are worked out.

The secretary-academician emphasized that it is now necessary to adopt a system of measures to improve the organization of mathematical economic research and raise efficiency by the use of mathematical economic models in national economic planning and management. Specifically, USSR ministries and departments must, beginning with preparation of the plan for the 12th Five-Year Plan, envision mandatory substantiation of plan assignments at all levels of management by calculations of the optimal production program and optimal plans for development and siting of production.

N. P. Fedorenko noted that in the past year special attention was devoted to working out the comprehensive program of scientific-technical progress for 1986-2005 by five-year plans. Significant organizational work was done. Specifically, the collectives of the institutes of the Economics Department were commissioned to prepare the summary section of the program entitled "Scientific-Technical Progress and the Fundamental Problems of USSR Socioeconomic Development."

He emphasized particularly that formulation of a unified system of balanced structures that reflects both the material-substantial and the financial aspects of public reproduction will make it possible to identify all the factors that are necessary to work out alternatives of national economic development and structural policy.

In addition to balance methods (which rely on macroeconomic and intersectorial models) to work out the hypotheses of economic development we must use numerous methods that make it possible to consider not just the economic growth factors modeled by traditional techniques, but also factors such as change in the socioeconomic prerequisites of labor activity by the population, changes in the economic mechanism, and others.

As Comrade L. I. Brezhnev emphasized at the November 1981 Plenum of the CPSU Central Committee: "The food problem, on both the economic and the political level, is the central problem of the entire five-year plan." Important tasks for institutes of the Department with respect to working out the Food Program follow from this proposition. During development of the Food Program we have not yet been successful in fully upholding the principle of the special-purpose system approach. The traditional approach remains dominant: development of program goals and indicators for the future based on the principle of extrapolating established trends and rates from the level already achieved.

N. P. Fedorenko noted that the economists of the USSR Academy of Sciences are working out a program of scientific-technical progress of the agroindustrial complex for a 20-year period and investigating the questions of the economic mechanism of the agroindustrial complex and refining its structure and system of management.

N. P. Fedorenko emphasized the need for special work on the question of the system of study and the concrete experience of the socialist countries in economic work. He noted that a number of institutes of the Department are conducting studies of political, economic, and ideological problems of world socialism and international relations with the fraternal countries. In the first place, the efforts of the collectives of institutes with international specializations are to be oriented this year to working out issues related to preparation of the new edition of the CPSU Program. In the second place, a clear orientation has developed in the research of many students of international relations to study everything that is best in the experience of the fraternal socialist countries and also the developed capitalist countries.

He noted that international economists will have to work out the problems of the steady convergence of the fraternal socialist countries and the development of economic integration on a deeper level.

As noted at the 26th CPSU Congress, the party program will have to reflect such fundamentally important phenomena of international life as the elimination of imperialism's colonial system and the increased political power in the world arena of dozens of new countries, many of which are setting their goal as development towards socialism. Certain new phenomena in the world of capitalism need interpretation, in particular such characteristics of the current phase of the general crisis of capitalism as the sharp growth in the role of the military industrial complex and transnational companies. Work will also be done to generalize and review achievements in the area of the theory and practice of peaceful co-existence and the struggle for peace and international detente.

N. P. Fedorenko emphasized that economic scientists face large and difficult tasks in the second year of the five-year plan, the year of the 60th anniversary of the USSR.

Participants in discussion of the report on the work of the Economics Department of the USSR Academy of Sciences for 1981 and the next tasks in development of economic science were: I. I. Lukinov (Ukrainian SSR Academy of Sciences), O. N. Bykov (Institute of World Economics and International Relations of the USSR Academy of Sciences), Yu. S. Shiryayev(International Institute of Economic Problems of the World Socialist System of the Council for Economic Mutual Assistance), N. T. Glushkov (USSR State Committee for Prices), T. S. Khachaturov (academician of the USSR Academy of Sciences), O. T. Bogomolov IEMSS [Institute of Economics of the World Socialist System] of the USSR Academy of Sciences), N. N. Inozemtsev (Institute of World Economics and International Relations), P. G. Bunich [Archives of the National Economy of the USSR Council of Ministers), V. L. Kantorovich (academian of the USSR Academy of Sciences), and S. S. Shatalin (VNIISI [All-Union Scientific Research Institute of Systems Research] of the USSR State Committee for Science and Technology).

Then V. P. Mozhin (Council for the Study of Productive Forces of USSR Gosplan) presented an interesting report on the problem of improving territorial planning and the siting of productive forces.

The general meeting adopted an appropriate decree.

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POSSIBLE IMPROVEMENTS IN PLANNING PRACTICES SEEN IN BELORUSSIAN EXAMPLE

Moscow PRAVDA in Russian 2, 3 Nov 82

[Article by V. Lyubitskiy, Belorussian SSR: "Gosplan and Competition"]

[2 Nov 82, p 2]

[Text] It is widely known that the enthusiasm of the people who were building a new society in the early 1930's made it possible to revise and add to the plans of the 1st Five-Year Plan. As a result, a second coal and metallurgical base was established in the eastern part of the country and Azovstal', the Kharkov Tractor Plant, and many other plants were built. Since that time, the combination of centralized planning and the labor creativity of the masses has become the norm in our life.

Today, when we are refining economic management, new possibilities are also being created for strengthening this interaction. Comrade L. I. Brezhnev has observed, "The socialist economic mechanism is expected to insure a good degree of surging energy and initiative."

What are the areas of this interaction? What successes can be achieved, and where are the additional efforts needed? This is illustrated specifically by the experience of the planning bodies of Belorussia, a republic with highly developed industry that produces one out of five motorcycles in the country, one of six tractors, one out of 10 refrigerators, as well as other motor vehicles, machine tools, computers, watches, fabrics, and much more.

1. Weighed on the Scales of the Economy

Point of view. The letter was heated and categorical: "We say the plan is the law, don't we? But a certain plant took on the obligation to produce 20 machine tools beyond the plan. And it produced them. Good for it, but because of this plant its neighbor did not have enough metal to fulfill its plan. And the chain of shortages went further. It was all because the law was violated, even for a good reason. I think that the question has to be put this way today: either the plan, or the spontaneity of competition."

Judging by everything, the author of the letter was firmly on the side of the plan. Confusion was felt in just one thing: he did not know what would happen with "spontaneity." After all, competition is not a planned measure, and it is not a table of work results. It is above all the attitude of the people toward their work. And how do you "take note" of skill, diligence, and enthusiasm? How do you celebrate innovative thought and a desire to help one's comrade? And can all this be considered in plans? It is better perhaps to ask a specialist about this question.

Nikolay Grigor'yevich Barabanov is no novice in planning. When he graduated from the institute Minsk was still healing the wounds of war and in the middle of the city, like a symbol of its steadfastness, stood the tall Government Building, which was saved from being blown up. Today most of the floors and rooms of this building are occupied by Belorussian SSR Gosplan, where N. Barabanov heads the department for introduction of new methods of planning and economic stimulation.

Planning, which even in the past was a little-understood process for the uninitiated, has become much more complex in recent years.

"Just consider," Nikolay Grigor'yevich began to count on his fingers. "The application of short-term and long-term forecasts expanded; that was one. The development of special-purpose programs was adopted, and that was two. Third came the use of mathematical economic methods and computers."

"You would think that this would make planning even more remote from the rank-and-file worker . In fact, however, planning today needs his cooperation as never before. We are now producing more industrial output than the entire world produced 30 years ago. And the assortment of goods reaches 10-12 million items (brands, types, and article numbers). Is it conceivable an economy of such size is efficient without universal, precise, even scrupulous consideration of reserves? It is obvious that planning agencies alone cannot manage here; production workers can make very tangible 'corrections' in their calculated plans. And they do. For example, in just the first quarter of this year Belorussian industry produced 121 million rubles worth of above-plan output. Of course, this required raw material not envisioned in the plans, and fuel beyond the limits, as well as additional railroad cars. Therefore it was by no means an easy time for employees of the republic Gosplan."

"Sure, from an economic point of view balances really are somewhat violated in such cases," remarked V. Kovalev, head of a department in the building materials industry, to this. "But as they say, balances will not fill you up. And if, for example, enterprises of the sector were able to produce tens of thousands of tons of cement beyond the plan, construction workers would only say thank you to them. In general, the needs of the economy are such that no output will be excess."

How can one object? By profoundly everyday logic more is truly better than less, especially if we are talking about extraction of ore and coal or other raw material sectors. But here is the testimony of the Belorussian SSR Central Statistical Administration: a great deal of unshipped output (often above-plan output!) accumulated at enterprises of the republic in the first quarter. This is the same output that is not excess output in the economy. It spoils, disappears, fills up buildings and grounds, requires unforeseen expenditures, and causes justified annoyance and indignation among the people who competed to produce a little more. Why should their labor, raw material, and working time be frozen? Wouldn't it have been better to concentrate efforts on improving qualitative indicators?

The interests of a planned, balanced economy demand that reserves uncovered by competition be considered in the planning stage. The new, recently ratified Statute on USSR Gosplan states directly that it is responsible for maximum use of reserves for raising production efficiency. Thus, if particular enterprises have realistic, unrecorded possibilities of doing more, a question arises immediately.

Planned Quality. Not long ago the capital of Belorussia received guests from throughout the republic. They came to study how the industrial collectives of Minsk are using reserves for production efficiency. And here is an interesting fact they learned: the planned growth in production of output ratified for the present year is more than double the level envisioned by the initial draft and the plan for labor productivity is almost four times higher. Moreover, both assignments are being fulfilled successfully. This means that the draft was obviously underestimated. But who was able to improve the quality of the plan and make it tighter, and how did they do so? Here is what V. Savich, first secretary of the Partizanskiy Rayon Committee of the Belorussian Communist Party in Minsk, said:

"As early as June and July the enterprises submit draft plans for the next year. They are studied by the planning section formed at the rayon committee of the technical-economic council. The specialists who are joined in the section analyze the supporting aspects of the plan's outlines: measures to mechanize production and improve labor organization. Then the draft is reviewed at the council of enterprise directors, and after this it can be submitted to the ministry."

This procedure, of course, makes it possible to consider a broad range of opinions, proposals, and reserves. In the automaton section of the motor plant L. Yusin's brigade found a possibility of raising labor productivity; the foundry workers of the tractor plant undertook to increase the daily production of steel by 100 tons through better use of equipment. The creative ideas of hundreds of people helped step up the plans here.

In the halls at the seminar, of course, doubts were expressed about whether the party committee might not be taking over improper functions. But the response was to show the concrete character of its leadership, the detailed knowledge of the work in the labor collectives, and the involvement of specialists. And of course, the results spoke for themselves.

Therefore, by promoting the identification of reserves, party and public organizations helped planning bodies considerably. It is important, however, that while relying on this help the ministries and Gosplan for their part raised the level of planning work at the enterprises and in the sectors. Gosplan in particular has been given the right to enlist specialists and production leaders to work out draft plans, to give ministries orders on fuller use of reserves, and to return plans to them for additional work.

With N. Barabanov we spent a long time looking for such an example in the sectorial department. Finally we found one. Reviewing the outlines for the next year, the department of local industry and domestic services spotted plainly understated figures in the calculation of the Belorussian SSR Ministry of Local Industry and got the ministry to increase the draft figures substantially. It is true that the people in the department were guided chiefly by the fact that the ministry's indicators for this year will be higher than expected. Does this mean that this is another of the notorious "planning from the level achieved"?

"There is nothing surprising here," Nikolay Grigor'yevich remarked. "The republic Gosplan, and this is even more true for USSR bodies, cannot go into detail about the reserves of each collective. Enterprise passports, which should serve as the basis of economic calculations, should only be used on the level of the enterprise itself and the republic ministry, if at all."

The sector needs a passport. This is the conclusion to which most leading economists of the republic are inclined. The passport would contain summary figures on associations and enterprises for the set of indicators used in compiling plans, which means that it would help calculate the capabilities of the sector more completely and objectively.

Here is just one of the many arguments in favor of it. Not long ago USSR Gosplan adopted a methodology for determining the intensity of plans. There is a formula, and it is not hard to derive a figure. But you cannot discern exactly what factors have influenced the particular level of intensity. Take output norms for an example. In the republic on the average each worker overfulfills them by 25 percent, and in many sectors and collectives it is even higher. At the same time, during the first six months one out of every 14 enterprises did not fulfill its plan for sale of output. This means that the level of overfulfillment of norms does not reflect the real efficiency of labor. But the initiative of competing workers reveals many opportunities here. Last year alone the review of existing norms, including reviews undertaken at the initiative of workers, raised productivity by two percent. By more actively pressing ministries to introduce sound norms the republic Gosplan could substantially raise the intensity of plans, especially if we consider that the ceiling on number of workers and employees is still exceeded at one out of five enterprises in Belorussia.

Other factors also indicate that the quality of plans is occasionally low. At the Minsk Worsted Goods Combine, which has a deservedly good production reputation, obligations for sale of above-plan output are usually raised twice a year, for holidays. But when doing this they do not revise the components of this gain with respect to mechanization of labor, raising people's qualifications, reducing effective goods, or reducing loss of working time. In other words, they simply "hold back" their reserves until the right time. And they do not put them in the plan, because they do not want to take a chance.

One would expect Gosplan itself to be the leader in the struggle for stepped-up assignments. But it turns out that Gosplan itself sometimes is not particularly interested in this. According to the existing statutes half of the output manufactured beyond the plan remains at the disposal of republic bodies. The purpose of this measure is clear, to encourage enterprises and ministries to use production reserves more vigorously. But the psychology of some managers dictates the opposite logic: it is easier to achieve the same results by adopting a lower plan. And certainly republic industry produces very salable articles: fabrics, lumber, and bricks. It is a substantial temptation for planning bodies!

But what holds back the energy of the competing workers most of all is the "plan adjustor." They are sick of them, and that will be our next subject.

[3 Nov 82, p 2]

II. Feedback Call Signs

These variable figures. During the last year the plans for volume and sale of output for enterprises of Belorussian local industry were adjusted 29 times. This is not a new practice, but are we always completely aware of its consequences? It can be proclaimed from podiums in thousands of different ways that the plan is the law and fulfillment of the plan is a matter of honor, but if the ministry raises and lowers it many times during the year, generally guided by internal considerations, the plan loses its mandatory force for production collectives.

"Changes in plans are called for by objective factors," says O. Mamoykin, chief of a sectorial department at Belorussian SSR Gosplan. Is this always true? Here is one case. Hardly four months had passed from the start of this year when deputy minister of local industry B. Ignatovich appealed to the republic Gosplan to lower their plan for production of electric guitars and concertinas. He made reference to a "rejection by trade organizations." But it was learned that the republic ministry of trade did not reject anything; it only confirmed its initial order which had been neglected when the annual assignment was met.

Last year the plan for volume of sale of output was changed for many industrial enterprises in the republic, and in one case out of four it was lowered. But 47 collectives fulfilled their initial assignments, including three Belorussian plants of the Ministry of Machine Tool and Tool Building Industry (of the seven whose plans were lowered), three of four from the USSR Ministry of Land Reclamation and Water Resources, two of four from the USSR Ministry of Petroleum Refining and Petrochemical Industry, and so on. What reason was there to give this "insurance," creating privileged conditions for some and imposing an additional burden on others whose plans were raised, sometimes as late as December? Instability of labor objectives can weaken people's trust of both the plan and of competition. In both cases the stimuli are like sails whose ropes are cut; they do not draw one forward.

One of the reasons for this phenomenon, which has been condemned frequently but lives on, lies in differing attitudes toward the very concept of "adjusting" the plan. They were 18 collectives of local industry among the enterprises whose plans had already been changed in March and April of this year. But the ministry does not consider that there was an adjustment. They say that within the limits of a quarter enterprises themselves can distribute their workload by months. But in the first place, under this kind of "innocent" balancing it is inevitably contract deliveries that suffer. And in the second place, as the ends of the quarter, half-year, and year approach the enterprise is sometimes so far behind the plan that the ministry faces a choice: either acknowledge its failure or tailor the figure to actual performance.

What can counterplanning do? The usefulness of counterplanning has been discussed many times. It makes it possible to tie the plan solidly to initiative and opens up new opportunities for socialist competition. The counterplan, substantiated and backed up by resources, can also be the most reliable means against plan adjustments because responsibility for it is shared equally by the enterprise collective and the ministry that supports it. The principle of "planning from below" has been consolidated by well-known party measures to refine the economic mechanism. But its adoption in practice is going quite slowly and inconsistently. By the end of the first quarter, only 19 enterprises in the republic had adopted counterplans for the current year, whereas last year there were 77 of them. Why is this?

In the first place, the instability of the very procedures for working out and adopting counterplans stands in the way. Each year the production collectives receive new explanations on this subject. This year alone there have been two of them, one in February concerning counterplan-82 and in June about counterplan-83. The February instructions arrived too late. Annual plans had already been adopted, obligations were assumed, and therefore many sectors (the Belorussian SSR Ministry of Timber, Pulp and Paper, and Wood Processing Industry, the republic Goskomsel'khoztekhnika, and others) preferred to simply refuse any new bother.

In the second place, some economic managers simply cannot break the habit of holding back reserves. Thus, the enterprises of the Belorussian SSR Ministry of Light Industry last year adopted counterplans to sell output worth slightly less than 6 million rubles. But by the end of the year above-plan production exceeded 70 million. This year the picture is the same. Needless to say, during the year the enterprise collective can discover unforeseen possibilities for production growth. But exceeding one's own outlines on such a scale can only be done by deliberately "conserving forces."

These are not isolated examples. This is clearly a reflection of inertia in economic thinking, and it is by no means helpful to the collectives themselves. For example, republic furniture makers did not risk adopting counterplans last year. It is true that they outlined obligations to manufacture 1 million rubles of output beyond the plan. But the actual overfulfillment was 8.5 million. The USSR Ministry of Timber, Pulp and Paper, and Wood Processing Industry asked the Belorussian Council of Ministers to award bonuses to workers and specialists of the sector. But if the figure they achieved had been envisioned in advance by a counterplan they would have been no need for such a request because their well-deserved incentive would have been guaranteed.

Certainly, cleverly concealing reserves has long since lost its practical sense. This is demonstrated once again by the practice of so-called supplementary assignments. They are given to collectives in the middle of the year and are not backed up by any resources. This means that the planning agencies openly assume the existence of concealed resources at the enterprises, and for their part the enterprises do not reveal their capabilities, anticipating tough assignments. The result is a standoff, but for economic efficiencies "games" threaten only losses.

Four years ago an interesting initiative was undertaken in Belorussia: on order from the Belorussian SSR Council of Ministers an intersectorial scientific methods council on questions of introducing progressive production methods was formed at the republic Gosplan. Thanks to the efforts of the council the number of collectives using the Dinamo work procedure of personal plans for raising labor productivity almost doubled, and the Shchekino method was fully introduced at one out of eight enterprises. The time is coming for the next step, introducing progressive experience in planning practice and implementing Lenin's idea of "forced" introduction of models of "labor organization." This refers first of all to work practices that are supported in the decrees of party and Soviet bodies. It seems that Gosplan should be the one to monitor and see that this is reflected in the counterplans of enterprises and ministries. But if this is to be accomplished, counterplanning must no longer be done by only individual collectives, generally progressive ones.

Searching for stocks. The most frequent justification attempted for plans that are not intense enough is difficulties with material supply. There is no question that industrial needs are constantly rising. But the significance of thrifty use of our wealth and competition for conservation of resources is growing just as fast. Just 15 years ago a one percent savings of rolled metal products in Belorussia was "worth" 14,000 tons; today it is 25,000 tons. The corresponding figures for standard fuel are 80,000 and 280,000 tons, while for cement the figures are 18,000 and 38,000 tons. And management psychology does not always keep up with these changes.

People's controllers at the Gomel'kabel' Plant, for example, found an overexpenditure of raw materials so large that if the collective had eliminated it it could have worked for nine months without additional orders. In such cases, of course, fines are applied and deliveries are cut down. But the effectiveness of these steps is ultimately low because the attained level of expenditure of raw and processed materials remains the guideline. But the requirements of an economical economy dictate more rigorous criteria, based specifically on the achievements of the leading collectives. Experience with the use of industrial waste products also illustrates this.

Last year alone waste products in the republic were used to manufacture output worth almost 138 million rubles. Nonetheless, overall a great deal more is lost, some of it because of shortcomings in planning and organizing competition.

Another factor that has a serious impact on the situation is the lack of a uniform attitude toward the problem in the planning agencies themselves. The enterprises of some ministries are given assignments to bring waste products into production, but the collectives of the ministries of Instrument Making, Automation Equipment, and Control Systems and Construction, Road, and Municipal Machine Building, for example, do not receive them. Gosplan only plans utilization of secondary resources; waste products are outside its view.

Sometimes the cases are flagrant. Not long ago the Gomel' Measuring Instrument Plant had 176 tons of entirely usable waste metal; only six tons were put into production and the rest (which included 20 tons of sheet stainless steel) was sent for scrap. It is easy to figure how much this kind of "management" costs the state: the enterprise received 25-27 rubles for each ton of scrap metal, while output worth 253 rubles is manufactured from one ton of metal waste products in the republic. But if fulfillment of the plan for turning in scrap metal promises the plant a bonus and failure to fulfill it threatens a fine, there is no incentive whatsoever to use the waste products. And we are certainly not talking about "free" materials! This waste metal is raw material that has already absorbed both labor and considerable capital.

We talked with L. Firisanov, secretary of the Central Committee of the Belorussian Communist Party, about the increased price of successes and shortcomings in management.

He said, "Refinement of the economic mechanism depends greatly on planning agencies. Moreover, the quality of our plans is directly linked to the people and influences their attitude toward work and their thoughts and moods. Planning, like competition, indoctrinates them. That's why the level of planning is not simply an economic question. Remember what Lenin said: for us economics is the most interesting kind of politics. The decree of the CPSU Central Committee on the work of the Minsk Oblast party committee to develop socialist competition also speaks of the need to combine the process of intensification of the economy more closely with the initiative of the working people. In the very near future we in the republic intend to discuss the question of raising the quality of planning work at all levels, from the enterprise to Gosplan."

The new Statute on USSR Gosplan has fixed the requirement of insuring a combination of centralized planning with the initiative and creative activism of labor collectives. It is important to bring the statutes on republic gosplans and local planning commissions — the ones who are directly at the source of initiative — into line with this quickly. As the plan, the central element of the economy, organizes the economy and subordinates it to a single goal, so competition nourishes the plan with the vital energy of the masses.

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INVESTMENT, PRICES, BUDGET AND FINANCE

INVESTMENT INDICATORS IN ECONOMIC FORECASTING

Moscow IZVESTIYA AKADEMII NAUK SSSR: SERIYA EKONOMICHESKAYA in Russian No 5, Sep-Oct 82 pp 66-76

[Article by Ye. A. Rutkovskaya and A. S. Smyshlyayev: "Investment Indicators in National Economic Forecasting"]

[Text] The basic trends of the change of the most important investment indicators and the factors, which govern their dynamics at the present stage of the development of the national economy, are examined. Particular attention is devoted to the interconnection of the total amount of capital investments and their structure with the development of capital-creating sectors. Other factors, which it is expedient to take into account in the modeling and forecasting of investment processes, are analyzed.

The forecast of the development of the national economy is formed as a result of the coordination of counter approaches, in which two important interacting aspects of reproduction--production resources and the end social needs--are taken into account [1]. Depending on the time aspect of forecasting, one approach or another acquires priority. The calculations "from needs to resources," when the determination of the indicators, which characterize the achievement of some rational level of consumption, is the starting point, are of greater importance in long-range forecasting. In the medium-range forecast there is a different approach--from resources to the achievement of the goals; the basic content of the medium-range forecast is determined by the duration of the investment cycle, which along with the amount of investments is an important factor which influences the rate and proportions of economic development.

The body of production functions has been used frequently and quite successfully in the calculations "from the resources" (see, for example, [2, 3]). In this case the national economic forecast is elaborated for the macroeconomic indicators of growth and the general resource limitations. In the case of a sufficiently flat dynamics of the basic indicators such an autonomous forecast of the final product makes it possible to create the basis of intersectorial forecasts. For the identification of the real conditions of balanced development at the intersectorial level (especially given the change which has emerged in recent years in the dynamics of a number of most important economic indicators) at this stage of forecasting it is already important to take into account the production and structural limitations in the development of physical production, its sectors and the output of individual types of products. Another method of calculation, in case of which the limiting influence of resources on the investment possibilities, and through them on the forecast amount of the final product, is taken directly into account, to a certain extent makes it possible to make progress in this direction.[1]

At the present stage of the development of the national economy the indicators of the reproduction of the capital-creating sectors themselves are included among the factors which limit the growth rate of capital investments and, consequently, economic development. Thus, along with the decrease of the growth of manpower resources the limitations in the growth of capital investments are acquiring a long-term nature. In order to increase the efficiency of social production it is necessary to use economically all primary resources, including investment resources. Precisely such a policy was specified by the 25th and 26th CPSU Congresses. During the 10th Five-Year Plan the increase of capital investments came to 29 percent as compared with 42 percent during the 9th Five-Year Plan (43 percent during the 8th Five-Year Plan and 45 percent during the 7th Five-Year Plan), including 32 percent in the sphere of physical production as against 50 percent in 1971-1975, 45 percent in 1961-1965 and 44 percent in 1966-1970. The indicated decrease of the growth of the investment indicators during the 10th Five-Year Plan implies the stabilization of the absolute increase of capital investments at the level of 1971-1975.[2] This is connected with the pursuit of the policy of decreasing the proportion of accumulation in the national income, with the solution of important problems in the area of social development and the increase of the standard of living. Thus, during the years of the 10th Five-Year Plan the consumption fund increased by 29 percent with an increase of the accumulation fund by 11 percent.[3] The slowing of the growth of capital investments is also necessary for the increase of the balance in the development of the sectors which produce and consume construction materials, for the improvement of the corresponding intersectorial proportions and the increase of the supply of the capital-creating sectors with resources.

It is necessary to stress that the factors, which limit the growth of capital investments, have an effect under the conditions when the further rapid increase of the production potential of the country is necessary. The general trends of economic development, which are aimed at the improvement of the structure of production and ensure the realization of the achievements of scientific and technical progress and a fast rate of the updating of products, require considerable amounts of capital expenditures.[4]

The absolute decrease of the growth of manpower resources in the 1980's and subsequent years, including the distant future, predetermines the need to expedite the growth of labor productivity.[5] One of the basic factors of the increase of labor productivity is the increase of the capital-labor ratio, which is connected with the need for major capital investments.

At present the increase of the capital-labor ratio is leading the increase of labor productivity both for the national economy as a whole and for the majority of its sectors. For example, the growth rate of the capital-labor ratio in the national economy is approximately twofold greater than the growth rate of labor productivity [6].

Scientific and technical progress is creating potential prerequisites for the leading growth of labor productivity; during the period of rapid retooling the capital-intensive form of development is economically justified only for individual sectors. The problem of ensuring not only a labor-saving, but also a capital-saving type of reproduction became especially urgent during the 10th Five-Year Plan, when the growth of investment expenditures slowed. However, as the reporting data of the past five-year plan show, the unfavorable trends in the ratio of the growth rates of labor productivity and the capital-labor ratio continue to remain.[6] The dynamics of these indicators in USSR industry is forming in the following manner (percent of 1970) [5, pp 139, 144]:

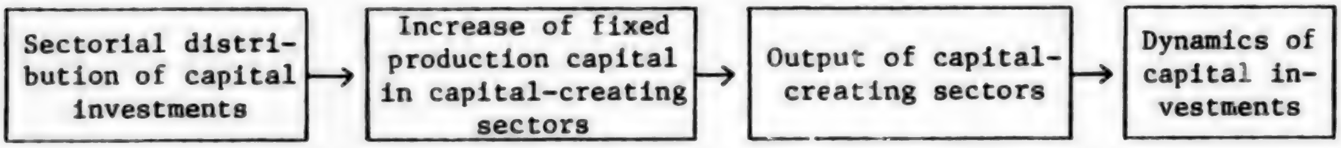
	1975	1980
Labor productivity.	134	156
Capital-labor ratio	142	193
Output-capital ratio.	94	81

The acceleration of scientific and technical progress in all the spheres of the national economy and the policy of its intensification make it possible to pose the problem of the gradual overcoming of the unfavorable trends in the ratio of the growth of labor productivity and the capital-labor ratio and the problem of overcoming the decrease of the output-capital ratio. At the same time, as was noted, the maintenance of high rates of the increase of labor productivity and the capital-labor ratio as the most important factors of economic growth under the conditions of a limited number of people employed in physical production is responsible for the need for major capital investments. The movement of productive forces to the eastern regions (the share of the latter in the capital investments in 1976-1980 increased to 16 percent [8, p 108]), where primarily new construction is being carried out and large expenditures and the building of projects of the production and nonproduction infrastructure are necessary, is leading to this. The further increase of the need for environmental protection measures is occurring; during the 10th Five-Year Plan about 11 billion rubles were allocated for these purposes.[7]

The development of the material and technical base of agriculture under the conditions of stable and even declining employment requires considerable capital investments. During the past decade more than a fourth of the total amount of capital investments were allocated for the development of agriculture, during the 10th Five-Year Plan this amount came to more than 170 billion rubles. In conformity with the Food Program during the 11th Five-Year Plan 189.6 billion rubles have to be assimilated in agriculture.

The increase of the demand for capital investments is also due to the transition to less favorable conditions of the extraction of raw materials, especially fuel, the increase in a number of sectors of the expenditures on offsetting the retirement of fixed capital and the considerable expenditures on the development of transportation.

Let us examine in more detail the relationship of the dynamics of the total amount of capital investments with the development of the capital-creating sectors. It is possible to depict this relationship schematically in the following manner:


Sectorial distribution of capital investments
Increase of fixed production capital in capital-creating sectors
Output of capital-creating sectors
Dynamics of capital investments

In the sectorial distribution of capital investments the sectorial changes in production, particularly the changes in the production volume of the capital-creating sectors, are reflected with a slight lead, and this in turn determines the dynamics of the total amount of capital investments (Table 1).

Table 1

Dynamics of the Capital Investments, Fixed Production Capital and Gross Output of the Sectors of the Investment Complex (Average Annual Growth Rate, Percent)*

Indicators	1961-1965	1966-1970	1971-1975	1976-1980
Machine building				
Capital investments.	8.8	10.2	10.7	7.5
Fixed production capital	11.4	10.0	10.0	9.5
Gross output	12.4	11.8	11.6	8.2
Ferrous metallurgy				
Capital investments.	5.1	4.1	5.4	3.0
Fixed production capital	10.7	8.8	7.4	6.2
Gross output	7.9	5.7	5.0	1.9
including finished rolled products	7.2	5.5	4.1	0.8
Construction				
Capital investments.	4.9	12.3	9.7	6.4
Fixed production capital	11.8	12.8	10.4	9.3
Amount of construction and installation work.	7.5	7.1	6.8	2.85
Construction materials industry				
Capital investments.	2.2	6.7	6.0	0.5
Fixed production capital	11.6	8.8	9.0	6.4
Gross output	8.9	8.4	7.2	2.15
Total amount of capital investments	7.7	7.4	7.2	5.2

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*Calculated according to [5, pp 50, 141, 158, 164, 178, 338, 347].

If we examine directly the relationship of capital investments and the production of output in the capital-creating sectors, as is evident from Table 1, it is possible to note a certain ambiguity in the dynamics of these indicators. This is explained first of all by the extreme complexity of the process of realizing the capital investments in the output, which is broken down in time. The dependence between them appears only on the average over a sufficiently long period of time. Thus, given the substantial limitation of capital investments in ferrous metallurgy (the average annual growth rate in 1961-1975 was 4-5 percent with a growth rate of the total amount of capital investments of 7-8 percent) the gradual lag of the dynamics of this sector behind the trends of production demand emerged.

A more direct, immediate relationship exists, which is quite obvious, between the increase of the output and the increase of the fixed production capital, from which this output "is removed." The gradual changes in the dynamics of the production of output as a whole are in line with the uniform (flat) nature of the dynamics of the capital. The substantially greater uniformity in the growth rate of fixed production capital as compared with the dynamics of the capital investments is explained by the purely balance-sheet ratio which exists between them. In the case of a high norm of the placements of fixed production capital into operation the growth rate of the capital (in spite of the slow rate of increase of the capital investments and their fluctuations by years) can surpass over a long time the rate of increase of capital investments, while gradually falling to their level, which is also noted, in particular, in the capital-creating sectors. Thus, the growth rate of capital in ferrous metallurgy was determined by the formed high norm of placements into operation, which fell gradually (especially appreciably during the last five-year plan):[8]

1961	1963	1965	1970	1972	1975	1977	1979
10.0	11.9	8.8	10.2	8.0	8.6	6.8	5.0

It is possible to trace the interrelationship of the increase of the production of capital-creating sectors and the total amount of capital investments both by individual periods and for a quite long interval of time. Thus, the uniform (flat) dynamics of production in the capital-creating sectors in 1961-1975 with a slight tendency to decrease, which is most noticeable in the dynamics of the output of finished rolled products, was responsible for the quite stable growth rates of capital investments--7.7 percent in 1961-1965, 7.4 percent in 1966-1970 and 7.2 percent in 1971-1975. The decrease of the growth rate of capital investments in 1976-1980 is closely connected with the slowing of the increase of the production volume of the capital-creating sectors and with the need to ensure the balance of the increase of capital investments with the possibilities of the development of these sectors. At the November (1981) CPSU Central Committee Plenum it was noted that the consideration of the resource limitations (both manpower and material resources) is also one of the important characteristics of the plan of capital investments for the 11th Five-Year Plan.

Thus, the statistical data make it possible to trace the vitally important economic relationships in the process of the reproduction of investments (the sectorial distribution of capital investments--the increase of the fixed production capital--the increase of the output in the capital-creating sectors--the total amount of capital investments), which it is expedient to take into account in the macroeconomic forecast.

In turn the total amount of capital investments in many ways determines the changes in their sectorial distribution, which is the basic goal of the construction of a dynamic intersectorial model and forecast on its basis. The very transition to lower annual growth rates of capital investments during the 10th and 11th Five-Year Plans--from 7-8 percent to 5 percent and less--is introducing new features in the forecasting of their dynamics in different sectors. The expediency of the economic description of the processes of the formation of capital investments in the sectors of industry and other sectors of the national economy is confirmed by the results of a number of studies [9-12]. In particular, the need to take into account along with the influence of the growth rate of capital investments in the national economy their order of priority is substantiated in one of the works [11]. In order to construct a detailed dynamic intersectorial model it is also necessary to take into account the interrelations in the dynamics of the elements of the investment block.

The accomplishment of the tasks, which are aimed at the acceleration of the growth rate of production in some sectors or others, and the tasks of retooling and the acceleration of the rate of technical progress in all sectors finds reflection in the change of the sectorial structure of capital investments. (Thus, the share of the petroleum and gas industry increased from 12.7 percent in 1966-1970 to 16.4 percent in 1976-1980, machine building--from 18.9 to 24.7 percent, the chemical industry--from 9 to 10.0 percent.)

The consideration of a number of circumstances, which are not directly connected with the increase of the production of output and the role of which in recent times has been increasing steadily (what is meant is the increase of the expenditures on the compensation for the retirement of capacities, on the increase of product quality, environmental production and so on), is also of importance when distributing capital investments.

Thus, the distribution of capital investments among the sectors of physical production is aimed at the solution of a number of problems of both an intermediate-term and a long-term nature. This cannot but lead to limitations of the capital investments in some sectors during individual periods, and at times for a quite long interval of time. Here disproportions in the dynamics of different sectors can be observed.

As the reporting data for 1966-1980 show [5, pp 337, 338], the sectors are quite clearly differentiated with respect to the growth rate of the capital investments in them. Thus, during the indicated period the capital investments in agriculture, transportation, machine building, the chemical,[9] petroleum and gas industries increased at a relatively high rate (Table 2). It is possible to group with the sectorial components, the proportion of which decreased, the investments in the production of traditional types of fuel (the coal industry) and construction materials (ferrous metallurgy, the construction materials industry) and in electric power engineering.

Table 2

Dynamics of Capital Investments in the Sectors of Physical Production

	1966-1970*		1971-1975		1976-1980	
	I	II	I	II	I	II
Productive capital investments. . . .	7.6	1.00	8.4	1.00	5.7	1.00
including:						
Industry.	6.6	0.85	7.1	0.85	5.4	0.93
Agriculture	9.6	1.23	10.7	1.27	5.3	0.93
Transportation and communications . .	6.3	0.81	9.7	1.15	7.3	1.27

[Table continued on following page]

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*In the first column there are the average annual growth rates in percent, in the second--the coefficient of elasticity, that is, the ratio of the average annual growth rate of capital investments in the given sector to the growth rate of productive capital investments.

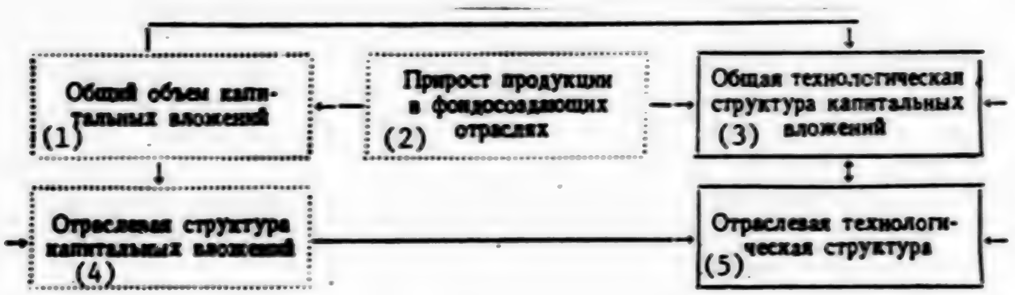
	1966-1970		1971-1975		1976-1980	
	I	II	I	II	I	II
Construction.	12.3	1.57	9.7	1.15	6.4	1.10
Electric power engineering.	5.6	0.72	4.4	0.52	2.4	0.41
Coal industry	4.1	0.59	2.9	0.34	2.85	0.50
Petroleum and gas industry.	8.5	1.09	8.4	1.00	9.5	1.67
Ferrous metallurgy.	4.1	0.53	5.4	0.64	3.0	0.53
Chemical and petrochemical industry .	4.8	0.62	7.3	0.87	7.25	1.27
Machine building and metalworking . .	10.2	1.34	10.7	1.27	7.5	1.29
Timber, wood processing and pulp and paper industry.	3.7	0.47	5.3	0.63	3.3	0.58
Construction materials industry . . .	6.7	0.86	6.0	0.71	0.5	0.10
Light industry.	11.1	1.42	5.9	0.70	3.7	0.65
Food industry	7.0	0.90	4.3	0.51	3.5	0.61

The long-term trends in the dynamics of investments for individual sectors undergo substantial fluctuations, which are due to weather conditions. However, the transition from one level of investments to another is accomplished over several years, and this is sensed in the differentiation of the growth rates of capital investments in individual sectors by 5-year periods, which stems from the factors pointed out above. Thus, during the 8th Five-Year Plan the investments in agriculture, construction, the petroleum and gas industry and machine building increased rapidly and steadily, while during the 9th Five-Year Plan the investments in agriculture, machine building, transportation and construction did. During the 10th Five-Year Plan the highest growth rates of capital investments were maintained in the sectors of transportation, in machine building and the chemical industry, and as compared with the 9th Five-Year Plan they increased substantially in the petroleum and gas industry. The limitation of the increase of capital investments during the 10th Five-Year Plan found expression first of all in the slowed increase of investments in the construction materials industry, electric power engineering, the coal industry, ferrous metallurgy, the timber, food and light sectors of industry.

During the current five-year plan and in the more distant future the limitations with respect to the capital investments in the majority of sectors of the national economy, apparently, may be even more drastic as a result of their redistribution in favor of the fuel and power sectors, the capital intensiveness of which is increasing, as well as in metallurgy--for the overcoming of its lag, in transportation, in the agro-industrial complex--in connection with the implementation of the Food Program. This, of course, should lead to a great strain on the intensive sources of the increase of production in many sectors--what is meant is the improvement of the use of operating fixed production capital and every ruble of capital investments.[10]

The increase of the effectiveness of capital investments involves an increase of the share of equipment in them. The technological structure of investments along with their sectorial distribution is also an important object of modeling and forecasting on the basis of the dynamic intersectorial model.

It is obvious that the indicators of their technological structure are included as an integral part in the system of interrelations of the investment process, which was examined above, while supplementing it (see the figure).


Общий объем капитальных вложений
(1)
Прирост продукции в фондосоздающих отраслях
(2)
Общая технологическая структура капитальных вложений
(3)
Отраслевая структура капитальных вложений
(4)
Отраслевая технологическая структура
(5)

Key:

1. Total amount of capital investments
2. Increase of output in the capital-creating sectors
3. General technological structure of capital investments
4. Sectorial structure of capital investments
5. Sectorial technological structure

The dynamics of the production of the capital-creating sectors has a substantial influence on the technological structure of capital investments, as well as on their total amount. As the calculations according to the data for 1950-1975 show, the resources of production determine to a greater extent the dynamics of equipment in the composition of the capital investments [13]:

$$x_{0724} = 347.812 + 3.529x_{107} + 0.2951x_{24} - 1271.9t$$

$$V = 2.0; \quad DW = 1.8$$

$$x_{0724} = 7763.9 + 1.3918x_{107} + 0.1110x_{24} + 0.1293x_{07} - 824.406t$$

$$V = 1.6; \quad DW = 2.0,$$

where x_{0724} is the amount of equipment in the productive capital investments; x_{107} is the flow of ferrous metals into machine building; x_{07} is the volume of output of machine building; x_{24} is the amount of productive capital investments; t is the time; V and DW are statistical characteristics--respectively the coefficient of variation and the Darbin-Watson coefficient.

As is evident, the deliveries of ferrous metals play an important role in the formation of the growth rate of the production of equipment. During the 10th Five-Year Plan the substantial increase of the share of equipment (during 1976-1980 it increased by 5 percent and came to 36 percent) was connected not only with the development of the capital-creating sectors (the increase of the output of machine building and construction materials), but also to a considerable extent with the rapid increase of the imports of machinery and equipment. The use of the cited equations for determining for 1976-1980 the deliveries of ferrous metals, which are necessary for meeting the demand for production equipment, shows that the growth rate of these deliveries should be at a level of not less than the 9th Five-Year Plan. It is obvious that the consideration of the increasing influence of imports of machine and equipment could show definite possibilities of appearance in the volume of produced equipment with a lower growth rate of the flow--x_{107}--

and the volume of output of machine building, which occurred during the 10th Five-Year Plan.

According to some estimates [14], approximately a third of the increase of the share of equipment in the capital investments in the national economy in 1976-1980 was due to the influence of the increase of the volumes and prices of import deliveries of equipment. The processes of automation and mechanization, the structure of production, the changeover of individual sectors to new technological processes and the development of the production infrastructure are among the most important factors which determine the dynamics of the share of equipment.

As is noted in many works (see, for example, [15]), the significant increase of the active portion of capital investments is connected with the substantial changes in their reproduction structure and with the rapid increase of the investments in the retooling and renovation of operating enterprises, which ensure the increase of the effectiveness of investments. At the same time resource limitations of various kinds (investment and others) are being overcome,[11] although they have their own difficulties, which are connected with the attraction of contracting construction organizations and the inadequate degree of industrialization of renovation work.

The policy of the retooling and modernization of the production system, which was adopted at the 24th and 25th party congresses and was supported by the 26th congress, is the most important component of the long-range investment policy, which is closely connected with the intensification of the economy. During the 10th Five-Year Plan the average annual growth rate of the capital investments in renovation exceeded by more than twofold their growth rate in the national economy as a whole. The need for the further rapid increase of capital investments for these purposes is also emphasized in the Basic Directions, which were adopted at the 26th CPSU Congress.

In addition to the enumerated factors the structural changes in the investment policy and the changes in the intensity of the deliveries of equipment by sectors can have a substantial influence on the overall dynamics of the technological structure of capital investments, since the level of the share of equipment fluctuates substantially by different sectors--from 25 to 70 percent.[12]

With respect to the nature of the dynamics of the capital investments and the change of their technological structure it is possible to distinguish three groups of sectors (Table 3). As is evident, the largest groups are Ia, IIb and IIIc, that is, the groups of sectors, in which the dynamics of the capital investments and equipment is unambiguous. Groups Ic, IIc and IIIa, in which the growth rates of both indicators deviate from the average indicators in opposite directions, are missing. All this testifies to the existence of a quite close dependence of the dynamics of equipment and capital investments in the majority of sectors.

At the same time a quite large number of sectors belong to groups IIa and IIIb, that is, to the groups in which in the case of an average or relatively low growth rate of capital investments the growth rate of equipment is accordingly higher than the average growth rate or at the level of the average growth rate. Thus, the increase of the share of equipment has a substantial load as a factor of the increase of the effectiveness of capital investments during each period in question in those sectors which are experiencing limitations in their growth to one extent or another, but first of all are experiencing them.[13] Hence it also becomes obvious that the quite smooth changes in the sectorial structure of the gross output can be correlated to the sharp changes of the parameters of the investment-capital block of the dynamic model of the intersectorial balance (primarily the coefficients of the technological structure of the capital investments and the unit capital expenditures).

Table 3

The Dynamics and Technological Structure of Capital Investments

Groups of sectors	1966-1970	1971-1975	1976-1980
I. Sectors with a relatively high growth rate of capital investments			
a) with a relatively high growth rate of equipment	Light industry, agriculture, construction, machine building	Agriculture, construction, machine building	Petroleum, gas, chemical industry, machine building
b) with a growth rate of equipment at a level near the average	Petroleum and gas industry	Transportation and communications	Transportation and communications
II. Sectors with a growth rate of capital investments close to the growth rate for the production sphere			
a) with a relatively high growth rate of equipment	Sphere of circulation, construction materials industry		Sphere of circulation
b) with a growth rate of equipment at a level near the average	Food industry, transportation and communications	Petroleum, gas, chemical industry	Agriculture, construction
III. Sectors with a relatively low growth rate of capital investments			
b) with a growth rate of equipment at a level near the average	Ferrous metallurgy, chemical industry	Timber industry, construction materials industry	Ferrous metallurgy, timber, light, food industry
c) with a relatively low growth rate of equipment	Electric power engineering, coal, timber industry	Sphere of circulation, electric power engineering, coal, ferrous metallurgy, food industry	Electric power engineering, coal industry, construction materials industry

The analysis of the technological structure of capital investments with a breakdown by sectors shows that in 1966-1980 the deliveries of equipment to agriculture, the chemical and light industry, construction and the petroleum and gas industry (by 3.5- to 4-fold) and to machine building (5-fold) increased most rapidly. The growth rate of equipment for these sectors in 1966-1980 (with the exception of individual periods) was at the level of or greater than the growth rate of the total volume of produced equipment, that is, the coefficient of elasticity, as a rule, was greater than 1.

Progressive trends of the increase of the share of the active portion of capital investments are traced during the period in question for all the sectors. In 1961-1980 with respect to the nature of the dynamics of equipment and its share in the capital investments two periods are clearly distinguished: 1961-1975 and 1976-1980. The former is characterized by the fact that with the steady increase of the share of equipment in such sectors as the coal and chemical industries, machine building, the timber industry, the construction materials industry and trade, in a number of others it varied in relation to the average share. During the 10th Five-Year Plan the proportion of equipment increases to a different extent, but quite significantly in all the sectors.

As the analysis of the coefficients of elasticity shows, the greatest lead of the growth rate of equipment as compared with the growth rate of capital investments and accordingly the most substantial change of the technological structure of the latter during the last five-year plan are characteristics of the construction materials industry, light industry, the sphere of circulation, the timber industry, ferrous metallurgy and the food industry.

The influence of the general factors, which were pointed out above and which determine the share of equipment, appears in different ways at the sectorial level. Thus, the processes of automation and mechanization have the most significant effect on the change of the technological structure of capital investments in machine building and the coal industry, the increase of imports--first of all in the chemical industry [14]. In light industry, ferrous metallurgy, machine building and the construction materials industry the change of the reproduction structure of capital investments is, obviously, a substantial factor of the increase of the share of equipment. In these sectors during the years of the 10th Five-Year Plan in the amount of state capital investments the share of the expenditures on renovation, expansion and retooling increased most substantially as compared with other sectors: in ferrous metallurgy--to 80 percent (1975--73 percent), in machine building--to 80 percent (1975--71 percent), in the construction materials industry--to 74 percent (1975--64 percent) and in light industry--to 75 percent (in 1975--64 percent).

The progressive influence of qualitatively new technologies on the technological structure of capital investments is evident from the example of the coal industry. In this sector, as is known, the share of the expenditures on the open-cut mining of coal (in 1980 they came to 37.8 percent, in 1975--32.2 percent, in 1970--26.7 percent), of which a greater share of equipment is characteristic, is increasing. A similar example is the change of the structure of the expenditures in electric power engineering: the increase of the proportion of capital investments for the construction of nuclear electric power stations. These expenditures are characterized by a more advanced technological structure.

It is possible to link the substantial changes in the dynamics of the technological structure of capital investments with specific positive changes which should occur in the very process of capital construction. It is a question of the need for the increase of the effectiveness of capital investments by the reduction of unfinished construction, the acceleration of their concentration and the limitation of new construction.

With respect to the technology itself the resources, which are consumed during the first year of the construction of the projects being started, are supplied mainly by the construction industry and the construction materials industry. In the case of the shift of capital investments for the completion of previously started construction projects a great load falls to the sectors of machine building, which deliver equipment, machines and devices. Thus, the change of the physical and material structure of capital investments and the considerable increase of the share of equipment in them are one of the necessary conditions of the normalization of capital construction, which is being carried out.

The analysis of the dynamics of the basic investment indicators makes it possible to identify important features, which it is necessary to take into account in modeling and in comprehensive national economic forecasting. This is first of all the connection of the total amount of capital investments and their technological structure with resource factors--the development of the capital-creating sectors (machine building, ferrous metallurgy, construction, the construction materials industry). At the upper, national economic level this connection is revealed directly, and it is important to take it into account, since the obtaining of a version of the development of the national economy, which is balanced on the intersectorial level, implies already at the stage of the forecasting of the macroeconomic indicators the consideration of the most significant production limitations.

The influence of the resources of the capital-creating sectors on the sectorial structure of capital investments can be taken into account during modeling and forecasting indirectly, in terms of the total amount of capital investments (for their technological structure--in terms of the total amount of equipment and the sectorial amount of capital investments). A large number of other factors, such as the dynamics of production, the effectiveness of investments, their interaction during distribution, the increase of the share of the expenditures which are not connected with the increase of output, and so on, which wherever possible should be taken into account when forecasting, influence the sectorial distribution of capital investments.

All the problems of capital construction, the assimilation of fixed capital and its use and, through them, the most diverse factors and interrelations, which are in effect in the economy, find manifestation in the process of the realization of capital investments in products. Therefore the study and description of the intermediate links, which connect the increase of output and the capital investments, particularly the process of the realization of capital investments in the placement of fixed capital into operation, seem expedient.

Finally, the processes of the formation of capital investments and their technological structure in the sectors with allowance made for the various interrelations of the components of the investment block and other factors and the processes of their transformation into products can be described by means of econometric equations, and different descriptions from the point of view of the factors being included for each sector are possible.

The basic elements of the examined approach to the modeling and forecasting of the most important indicators of the investment-capital block find expression in the work on the construction of an econometric intersectorial dynamic model.

FOOTNOTES

1. The coordination of the macroeconomic indicators with the results of the structural forecast of the production of output and the capital investments with a breakdown by sectors is accomplished within the dynamic model of the intersectorial model.

2. A relative decrease of the growth rate and of the absolute increase of capital investments is envisaged during the 11th Five-Year Plan, they will increase in 5 years by 10.4 percent [4].

3. The proportion of the consumption fund in 1980 came to 75.3 percent. In 1985 it will have increased to 77.3 percent.

4. A high growth rate of capital investments is also characteristic for other industrially developed countries. Thus, in 1971-1979 they increased in the United States by 28 percent, in Canada--by 49 percent, in France--by 39 percent, in Japan--by 55 percent, in the GDR--by 49 percent, in the CSSR--by 66 percent, in Bulgaria--by 1.7-fold [5, p 85].

5. During the 9th Five-Year Plan the productivity of national labor increased by 23 percent, which corresponds to a saving of the labor of 20 million workers. During the 10th Five-Year Plan labor productivity increased by 17 percent (in 1981-1985 it should increase by 17-20 percent).

6. During the past decade, and particularly in 1976-1980, the increase of the failure to man new workplaces owing to a substantial gap in the dynamics of the increase of fixed capital and manpower resources with an increase of the scale of new construction and the inadequate replacement of obsolete equipment has been pointed out as one of the factors which are leading to the decrease of the output-capital ratio in industry, agriculture and construction (see, for example, [7]). During the 11th Five-Year Plan steps should be taken, as is indicated in the Basic Directions, to achieve a balance of the available and newly created workplaces with manpower resources.

7. A significant increase is being observed with respect to the share of one-time expenditures, which are being used for the prevention of environmental pollution, and these assets are stipulated by the plans and estimates of the enterprises being built in all sectors of the national economy, which directly affects the specific capital-output ratio and the production cost of products. Thus, for a number of works the modern treatment facilities require about 30 percent of the total capital investments in the project, while for petroleum refineries they require up to 50 percent. An ever increasing portion of the capital investments is being allocated for the qualitative improvement of

production and the output being produced, which is evident from the example of ferrous metallurgy. Thus, according to the data of the Central Scientific Research Institute of Ferrous Metallurgy, the proportion of the capital investments for these purposes in 1961-1965 came to 17.8 percent, in 1971-1975--21.9 percent and in 1976-1980 (according to the plan)--27 percent.

8. The norm of placements into operation is the ratio of the placement of capital into operation to the value of the fixed production capital at the end of the year in percent. The high norm of placement into operation at the beginning of the period in question and its substantial decrease are also characteristic of other investment sectors. Thus, in machine building it decreased from 12.4 percent in 1970 to 8.7 percent in 1979, in the construction materials industry--respectively from 10 to 5.0 percent.

9. With the exception of the 8th Five-Year Plan, of which the limitation of capital investments in all the sectors producing construction materials is characteristic.

10. As is known, the indicator of the effectiveness of capital investments or the unit capital expenditures is a most important characteristic of intensification. In its dynamics with respect to the sectors of industry and the other sectors of the national economy it is possible to detect long-term trends, although the fluctuations are very significant.

11. In particular, V. Kirichenko [7], while pointing out the lack of conformity of the dynamics of fixed capital and manpower, which has formed in the economy, indicates that in order to achieve a balance "it is necessary to intensify the processes of the replacement of obsolete operating equipment, renovation and modernization, which ensure an increase of the technical level and the expansion of the production of output without an increase of the number of those employed at the enterprises being renovated."

12. Let us note that such sectorial differences in the technological structure of capital investments to a considerable extent are governed first of all by the differentiation and the peculiarities of the sectorial structure of capital.

13. It is obvious that the increase in the capital investments of the share of the expenditures on renovation and retooling, which are characterized by relatively fewer specific capital investments, has the same importance for all the sectors.

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SEVERAL ASPECTS OF PRICES AS LEVER IN SOCIALIST ECONOMIC MECHANISM DISCUSSED

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 5, May 82 pp 73-77

[Article by A. Mel'nik, candidate of economic sciences: "The Price in the Socialist Economic Mechanism"]

[Text] On the one hand, the system of scientifically substantiated prices in the socialist economic mechanism reflects the scientific-technical level, quality, and use effect of the output. On the other hand, it is an effective lever that influences the process of public production and insures observance of essential proportions in the national economy, stimulates conservation of material resources, accelerates scientific-technical progress, production of output and the necessary quantity and quality, and so forth. This characteristic of planned prices results from their planning-accounting, distribution, and stimulating functions.

The planning-accounting function of the price is realized in practice by determining planned prices taking into account socially necessary expenditures of labor to produce specific types of output. This means that no matter what method may be used to determine prices, they should increasingly reflect socially necessary expenditures of labor and insure reimbursement of production and handling costs and a certain profit for each normally operating enterprise. The interests of production collectives, society, and its individual members should not be impinged upon when determining the level of prices.[1]

The price, performing its planning-accounting functions, above all reflects the production costs of output. But the price should not be a passive reflection of prime cost; it is expected to actively influence formation of this cost. As stated in the materials of the 26th CPSU Congress concerning the role of prices in stimulating rational use of production resources, the price should exert a vigorous pressure toward lowering the prime cost of output. This requires an improvement in the qualitative state of means of production and productive use of them, conservation of raw and processed materials, fuel, and energy, rational organization and siting of enterprises, and timely introduction of technological processes and technical innovations. Because the prime cost of output reflects expenditures of both embodied and live labor, a correct determination of the labor-intensity of articles plays an important part in substantiating prices. This is especially important today with the transition to planning and evaluating enterprise (association) activity by normative net output.[2] This indicator, calculated for each specific article, reflects better than others the contribution of the production collective to attainment of the final national economic result: volume of production of gross (commodity) output; labor productivity; sales; return on capital per square meter of production space; prime cost of output; profit (profitability), and others.

Normative net output (wages plus an average profit) is part of the price. Like the wholesale price, it is established on the basis of average sectorial labor expenditures. In this case it expresses newly created value per unit of output in the corresponding sector more accurately. Introduction of the indicator of normative net output in the cost accounting mechanism imposes heightened demands as to techniques of calculating production costs, determining profitability levels, and accounting and reporting to insure every possible reduction in the prime cost of output, which acts as the basis for calculating the final levels of prices.

In the practical work of determining prices for specific types of articles in recent years normative-parametric methods have been used more and more widely. They take as the basis not just the prime cost of a certain type of output, but also a comparison and testing of planned expenditures with change in the technical parameters and use properties of the articles. During such a comparison it is easier to identify instances of unsubstantiated growth in expenditures and to shape the price not only from the producer's standpoint but at the same time consider the interests of the consumer, changes in the use properties and quality of the articles. Prices should exert an active influence toward lowering the prime cost of output and raising the productivity of public labor.

Prices will have a more effective influence on production costs when economic and planning policy moves to direct centralized assignments for stabilizing prices and lowering price levels. Society must use a reflection not only of the general trend of price changes but also development of concrete state measures to reduce or maintain a permanent optimal level of prices in plan assignments for the sector as a whole or the most important types of articles; this is an effective lever for influencing production efficiency. The decree of the CPSU Central Committee and USSR Council of Ministers entitled "Improving Planning and Strengthening the Influence of the Economic Mechanism on Raising Production Efficiency and Work Quality" points out this characteristic of changes in wholesale prices for industrial output. It should be emphasized that no capitalist country in the world can base its economic policy on constant price levels for the bulk of output produced because of the spontaneous action of economic laws. Stabilizing wholesale prices for the principal types of industrial output for a period of five years creates additional possibilities of better use of the price formation system and its potential for planned management of the socialist economy and meeting social and personal needs.

The economic mechanism of socialist society makes broad use of the distribution and stimulating functions of prices. Prices perform their distribution function through distribution of labor in conformity with social needs. The distribution function of prices is used to regulate the profitability of producing various types of output and to accumulate monetary resources in the state budget to carry out major investment for the purposes of accelerated development of production and consumption and solving important socioeconomic problems within the framework of the entire national economy and its particular regions.

The stimulating function of prices is insured by means of enterprises' realizing their material interest in producing output of the necessary quantity and quality, development of production in the direction needed by society, raising the efficiency of use of material resources, stepping up the introduction of technical advances, and so on. This characteristic of planned socialist prices was emphasized in the document "Basic Directions of Economic and Social Development of the USSR for 1981-1985 and the Period until 1990," which states, specifically, that it is essential "to enhance the stimulating effect of wholesale prices on improving the quality of articles and stepping up incorporation of highly efficient new technology and replacement of outdated technology."

The system of stimuli to improve the quality of output by means of prices is closely associated with the state system of evaluating the quality of output by categories. In our country and a number of socialist countries the output produced by enterprises is evaluated by three categories: highest, first, and second. Output of the highest category has the best qualitative characteristics and must be given the State Mark of Quality. This output corresponds to the best world and domestic models in the particular sector and ratification of higher prices or price supplements is the principal material stimulus to produce it. Steadily increasing the proportion of output in the highest quality category is one of the most important challenges that must be met in the 11th Five-Year Plan.

Using prices in the mechanism for managing the quality of output involves both raising the level of prices for high-quality output and also lowering prices. Price supplements are established to prices for output with good technical-economic characteristics, while discounts are established for obsolete output. The central point of using value levers to stimulate an improvement in the quality of output by means of price supplements and discounts is encouraging enterprises to produce above all output with the Mark of Quality.

An efficient system of price supplements and discounts depending on the qualitative level of the articles was worked out in the above-mentioned decree of the CPSU Central Committee and USSR Council of Ministers. At first glance this is not a new problem. Indeed, price supplements and discounts as a stimulus to improving output were used quite widely in the last five-year plan and, along with other factors, had a positive influence on raising the overall qualitative level of articles and increasing the production of output with the Mark of Quality. At the same time, more than 10 years of experience with evaluating the output of industrial enterprises by quality categories and establishing price supplements and discounts on this basis has shown that the existing cost mechanism for managing output quality does not give enterprises and associations adequate incentive to raise output quality. Above all the level of price supplements has been low. In 1977 the State Committee for Prices ratified more than 3,000 incentive supplements to wholesale prices for new, highly efficient machines, pieces of equipment, and instruments. The supplements amounted on the average to about four percent of the wholesale prices and 10 percent of the national economic impact distributed between the manufacturer and the consumer. This is not an adequate level of price supplement, and it covers only an insignificant share of the total number of articles certified for the state Mark of Quality.

The problem of consistent application of discounts for obsolete output proved equally important. According to existing enactments discounts from prices for obsolete output are to be applied by the ministries and departments that produce this output. Of course, because of departmental interests this output in fact "slips by" accounting and control.

The decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Improving Planning and Strengthening the Influence of the Economic Mechanism on Raising Production Efficiency and Work Quality" basically eliminated the shortcomings that occurred in the effective system of wholesale price supplements and discounts and pointed out concrete ways to improve their practical application. Above all the sphere of action of price supplements was broadened. They are established for all highly efficient and quality industrial output for a period of up to one year, while for especially complex output the term is up to two years. Price supplements and deductions to economic stimulation funds are also set according to existing norms for output which has been re-certified. When goods are given the state Mark of Quality, the temporary wholesale and retail prices set for them are kept for the entire effective period of the Mark. The operative term of price supplements for output that has been awarded the Mark of Quality is itself increased. If it formerly was operative for 2-3 years, the price supplement is now established for four years, and five years for especially complex output. In addition the level of price supplements is significantly increased. The incentive supplement to the wholesale price for new, highly efficient production-technical output whose parameters correspond to the best domestic and foreign models is set at 0.5-1.25 of the norm of profitability adopted in determining the level of prices for output of the particular group of items or sector. An important aspect is that part of the decree which states that price supplements are to be directly dependent on the annual economic impact expected from the production of the particular output. And if production of the output is based on developments which have been acknowledged as inventions or discoveries by the established procedure, the amount of the supplement is increased 1.5 times.

The stimulating role of price supplements for high quality output comes from the fact that the bulk of profit from producing this output remains at the disposal of the enterprise. If the output is significantly improved deductions to enterprise economic stimulation funds are made in higher amounts according to ratified norms. The incentive supplements have become a flexible price tool that promotes accelerated scientific-technical progress and improvement in the quality of output. In 1979-1980 the USSR State Committee for Prices ratified incentive supplement and prolonged their effective terms for 9,721 types of output from machine building alone. The scale for calculating supplements, which is more favorable than the earlier ones, made it possible to increase the amount of supplements to the wholesale price in machine building sectors in 1981 to 6.2 percent compared to 3.5 percent in 1979 or, respectively, to 18.9 percent of the national economic impact compared to 15.1 percent in 1979. The sum of additional profit from sale of output in the highest quality category was 333.2 million rubles in 1980 for the machine building ministries alone.[3]

The question of discounts from prices for output that does not meet present-day requirements is also very timely. Discounts from the wholesale price in the amount of 50 percent of the profit received from sale of this output are applied for output in the second quality category and for articles which were not certified at the scheduled time. When the time for withdrawing second-category output from production has expired the wholesale price discount is set at the full amount of profit. In this case the output is sold at prices without a discount and the amount of these discounts is contributed to the state budget.

Determining the precise sanction-imposing functions of the USSR State Committee for Standards to strengthen the monitoring of compliance by enterprises, associations, and ministries with requirements for certification of output and quality of certified articles was an important facet of managing the quality of output by means of price supplements and discounts. When the established requirements are violated the State Committee for Standards takes the state Mark of Quality away from the output and reduces deductions to economic stimulation funds by the amount of price supplements paid to the funds from the start of the year for the particular output. The decision assigning the output to the highest category is also cancelled when its production is stopped for an extended period (more than 12 months).[4]

It must be emphasized that after the 12 July 1979 decree of the CPSU Central Committee and USSR Council of Ministers price supplements and discounts began to be used much more actively.[5]

Carrying out the decree of the CPSU Central Committee and USSR Council of Ministers on improving the economic mechanism, the USSR State Committee for Prices together with the appropriate ministries worked out and ratified new wholesale prices and rate schedules for industry. They were put into effect in January 1982. A total of 2,020 new price lists were developed. Primary attention was concentrated on enhancing the role of wholesale prices and rate schedules in economic stimulation of scientific-technical progress, maximum conservation of fuel-energy resources, ferrous and nonferrous metals, and raw and processed materials, raising the quality of output, and seeing that the price more fully reflects socially necessary expenditures for its production under the new conditions of organization of cost accounting and incentive. For example, planned losses in coal extraction, logging, and production of thermal energy have been eliminated. The unjustifiably high profitability of certain sectors and groups of output, in particular in electronics, radio engineering, instrument making, and chemical industry, is being eliminated. The new price lists have better correspondence among prices for mutually substitutable types of output and they are differentiated by territory. For example, wholesale prices for plastics and synthetic resins have been lowered, which opens up an opportunity to use them more extensively in place of nonferrous metals.

Special attention was devoted to using prices to stimulate development of the wealth of Siberia and the Far East by increasing the level of profitability in new prices (2.4-2.6 fold).

In order to give associations and enterprises a greater interest in producing less materials-intensive articles, the profit included in the new prices was calculated by profitability norms established relative to profitability, minus material expenditures. In addition to refining wholesale prices for industrial output norms of net output included in the new price lists or supplements to them were worked out and ratified. Thirty-three ministries are being switched to use of the index of normative net output in 1982, including all the machine building industries.[6]

Thus, improving wholesale prices predetermined the need, in the first place, to insure preparations for and a revision of prices and technical norm documents on the basis of progressive norms of labor-intensity, fuel-energy resources, metal-intensity, and other expenditures; in the second place, development and ratification of net output norms as a component part of the wholesale price, and, in the third place, taking particular steps to strengthen the influence of prices on raising production efficiency and work quality.[7]

An important problem in refining wholesale prices was working out economic criteria for evaluating the use characteristics of output in the form of qualitative parameters as a concrete expression of the final results of the efforts of production collectives. An objective evaluation of articles is impossible without this. The main criterion in evaluating output is the national economic effect.

For example, the most important requirement of new machine building output, for evaluating its quality and determining the level of prices, is that the prices for new machinery and equipment should be lower calculated per unit of final useful effect. This means that in the mechanism for stimulating technical progress prices should take account not only of expenditures to produce the new technology but also its economic efficiency. It is noteworthy that the efficiency of new technology has increased significantly in recent years in conformity with measures on prices envisioned by the decrees on improving the economic mechanism. If the level of efficiency in 1979 is taken as 100 percent, it was 106.5 percent in 1980 and rose to 112.1 percent in the first six months of 1981.[8] But there are many problems to be solved in evaluating the economic efficiency of machine building output. Experience shows that the economic effect established by the manufacturing ministry in agreement with the customer is often overstated by 30 percent and more. The customers who confirm the exaggerated effect bear no responsibility for its genuineness. It would plainly be advisable to plan and account for the return from new technology to the consumer through absolute indicators of decrease in the prime cost of output and labor productivity, in other words, to calculate the economic effect from the year of its purchase.

A new form of using price formation to stimulate technical progress is the application of graduated prices for machine building output. They were instituted in 1974 in the "Methodology for Determining the Wholesale Prices of New Production-Technical Output." The interests of producers of new technology are realized by insuring that they have the necessary level of profitability (not lower than the sectorial average), while for the consumers this is accomplished through the increased economic effect and reduction in the level (steps) of prices in the long run. The main requirement for graduated prices is to insure a decrease in the cost evaluation per unit of useful effect of the new machine, equipment, and instruments compared with base articles over the long run.

Practical application of graduated prices as a stimulus to technical progress is based on setting upper and lower price limits. The wholesale price for new technology is established between these limits so that it creates favorable conditions for production and incorporation of the new output. The process of establishing the wholesale price for new output in place of output incorporated earlier includes the following stages: (a) selection of a base article to which the new one is compared; (b) calculation of the upper price limit at the level where the benefit to the consumer from use of one or the other type is equal; (c) calculating the lower price limit at which manufacture of the base article or the new one is equally profitable to the producer; (d) determining expenditures to prepare for and produce the output, including costs that are not covered through the capital of the fund for incorporation of new technology; (e) comparison of the calculated levels of the upper and lower price limits for computing the economic efficiency of the articles; (f) determining the price that insures (by virtue of the technical and other advantages of the new output) certain advantages for both the producer and the consumer.

The lower limit of the wholesale price, the level at which it is equally profitable for the manufacturingenterprise to produce the new output or the old, is determined on the basis of prime cost together with normative profitability:

$$P_{low} = C + PfI,$$

where P_{low} is the lower limit of the wholesale price, C is the prime cost of new articles taken as the base of the wholesale price, Pf is the norm of profitability established for the particular sector calculated relative to the cost of productive capital, and I is the capital-intensity of the new output measured with due regard for additional capital investment necessary to manufacture it.

If it is practically impossible to determine the capital-intensity of new output, the calculated profitability computed relative to the prime cost of the output is taken to determine the lower price limit.

The lower limit of the graduated wholesale price for new technology reflects the interests of normally operating enterprises that produce the bulk of the particular type of output and shows what it costs the national economy to produce each better-quality article. Although expenditures connected with the production of new machinery are initially covered for the most part from the fund for incorporation of new technology, the current costsof the enterprise, and sometimes also the capital-intensity of production, rise in the first years of incorporation of the new articles. Therefore, the price for new technology is set above the lower limit. This insures reimbursement of additional expenditures and a profit. The upper limit of graduated prices acts as an important guideline for the introduction of new technology in the national economy. The main advantage of prices determined by periods (stages) of operation is that the prices take account of rapidly changing conditions of production and consumption of the new output. These prices insure that the manufacturer will cover the higher cost of the initial period of production and receive essential profit, while as the technology is worked out and prime cost goes down, prices will decrease. Moreover, the price for obsolete output will not give the manufacturer a normal level of profitbility.

High initial prices for new technology permit more effective compensation for increased enterprise costs in the period of incorporation of new output. This gives producing enterprises a greater interest in new articles. At the same time the prices did not consider merely the improvement in the technical-economic parameters of the output, but also take into account the effect realized by its use in different sectors of the national economy. This also gives the consumer an interest in using the new technology in production.

Graduated prices are the most progressive form of combining the economic interests of producers and consumers of new types of articles because they give the most reliable reflection of the formation of socially necessary labor expenditures for machine building output in different stages of its production.

An important practical result of improving planned socialist prices is the use of ceiling prices on new technology. They are established by agreement of the producer and consumer of the new article as early as the design stage and represent an upper limit which restricts the future wholesale price of machine building articles. Ceiling prices give concrete form to the economic conditions of occurrence of new technology because they take account of the economic interests of the producer and consumer and the economic efficiency of the new technology. Thus, they guarantee to the consumer that the specific cost per unit of useful effect of articles will decrease an average of 20 percent. Ceiling prices generally express the maximum permissible initial level of graduated prices taking into account the useful effect, and therefore they determine the movement of prices for machine building sectors.

Initial wholesale prices, even temporary ones, may not be developed and agreed upon at levels above the ceilings which have now become mandatory when state standards and technical specifications are ratified. The USSR State Committee for Prices registers ceiling prices for the most important types of output in the technical design stage so that if design work is not done well it can stop development or improve the article. In 1977-1979 about 1,000 ceiling prices were submitted to the USSR State Committee for Prices for registration. Ten percent of the designs were rejected for registration because of the low efficiency of the new technology. In 1980 13 ceiling prices for metal-cutting lathes were not registered because of inadequate efficiency and high prime cost.

Ceiling prices, like graduated prices, are still not used widely enough. Universal introduction of them can establish a real bar against inefficient technology.

FOOTNOTES

1. The author does not consider how the interests of individual members of society are taken into account in prices by means of the system of retail prices. How prices reflect the interest of enterprises that consume industrial output is considered somewhat later in the article.

2. See 12 July 1979 decree of the CPSU Central Committee and USSR Council of Ministers entitled "Improving Planning and Strengthening the Influence of the Economic Mechanism on Raising Production Efficiency and Work Quality," Moscow, "Politizdat", 1979, p 14.

3. EKONOMICHESKAYA GAZETA No 44, 1981, p 11.

4. 12 July 1979 decree, op. cit., p 56; EKONOMICHESKAYA GAZETA No 51, 1980, p 16.

5. See EKONOMICHESKAYA GAZETA Nos 23, 24, 30, 50, 1980; Nos 39, 43, 1981.

6. Ibid., No 29, 1981, p 9.

7. Ibid., No 17, 1980, p 7.

8. Ibid., No 44, 1981, p 11.

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INVESTMENT, PRICES, BUDGET AND FINANCE

THEORETICAL BASIS OF SOCIALIST PRICES DISCUSSED

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 7, Jul 82 pp 31-37

[Article by A. Savchenko, docent, candidate of economic sciences: "The Basis of Socialist Prices"]

[Text] The question of the basis of prices under socialism is a central issue in the theory of planned price formation. The conclusion that socialist prices are based on transformed (modified) value has gained increasing force in our literature in recent years. But there is still no ultimate theoretical clarity as to its specific form.

At the present time the idea proposed by V. D'yachenko has received the greatest recognition. According to it socialist prices are based on transformed value in the form of calculated socially necessary labor expenditures (SNLE). V. D'yachenko considers the key aspect of calculated SNLE to be taking account of production efficiency in prices. He lists the following two factors that cause the transformation of value into calculated SNLE: (1) differentiation of public labor productivity, the capital-labor ratio, and the capital-intensity of output; (2) differentiation of the use qualities of the products of labor.[1]

Working out the idea of calculated SNLE became an important stage in development of the methodology for investigating the basis of prices under socialism. In the first place, this idea was the first to consider the necessity of preliminary identification of those factors on which one should rely in isolating the price basis specific to socialism. In the second place, during the process of development of this idea the stereotyped approach to the norm of net profit included in prices, which had dominated earlier, was overcome. But the comprehensive analysis of calculated SNLE made in our literature[2] led to the conclusion that this category cannot act as the basis of socialist prices.

In the first place, those factors which supposedly cause the transformation of value into calculated SNLE do not characterize socialist production relations and therefore cannot define the form of price basis specific to socialism. After all, differentiation of labor productivity and the use characteristic of output are equally typical of capitalism. Moreover, K. Marx did not assign them to the group of factors that determine the nature of the basis of capital prices. In the second place, the idea of calculated SNLE is based on an intersectorial comparison of labor productivity. But we know that labor productivity characterizes concrete labor which is not comparable in an intersectorial breakdown.

No indirect indicators of labor productivity to which the advocates of calculated SNLE resort can eliminate this incompatibility.[3] The differentiation of labor productivity can only characterize individual labor. Its result is differentiation of the individual cost of the products of labor of a single sector. Moreover, labor productivity is related only to the cost of the commodity. But a change in the cost of the commodity and a change in the character of the price basis are two different phenomena. The first is a result of change in labor productivity embodied in the commodity; the second is a change in the nature of relations between subjects of commodity production. The chief methodological mistake being made here is that the basis of socialist prices is derived from an analysis of the process of creating value in general, when it can only be determined by the nature of those special social relations in which this process occurs under socialism.

In the third place, calculated SNLE cannot operate as the transformed (modified) value of the commodity. The point is that the concept of "transformation" means "to change the form of existence or be expressed by means of a corresponding form." But exchange value, and ultimately the price, is the only social form of value. Therefore value can only be transformed into price. Characterizing transformed value which performs the function of the basis of capitalist prices K. Marx stressed: "We should understand that the price of production means the price of the commodity."[4] As SNLE, this category is not a form of value, but rather an internal measure of it.

Of course the price in general and the price which plays the role of the basis of actual prices are not the same thing. K. Marx called the transformation of value into price in general a formal transformation which leaves us in complete ignorance of what lies at the basis of actual prices. As for the transformation of value into price which performs the function of the basis of actual prices, in this case value is not transformed into a simple price, but rather into a price that steadily (consistently) deviates from value. This kind of price serves as the basis of actual prices, as the center from which actual prices deviate temporarily (randomly). In this case it can be stated that the basis of actual prices deviates from value. Unfortunately, this statement is often ignored in our literature.[5] But long ago K. Marx criticized D. Ricardo for this kind of omission. Ricardo saw only "random deviation of market prices from the price of costs but did not take into account permanent deviations of market prices because they correspond to the prices of costs" (that is, to production prices — author).[6]

These shortcomings of the idea of calculated SNLE testify to the need for further investigation of the basis of socialist prices. The key aspect of this investigation should be identifying those characteristics which prices acquire under the influence of socialist production relations.

The thesis which says that the basis of socialist prices is the product of socialist production relations is professed in one form or another by virtually everyone who is studying the matter. But this is entirely inadequate. The basis of socialist prices cannot be derived directly from this thesis because it does not answer the following essential questions. The first one is: what kind of production relation characterizes the essence of socialism and therefore has the capability of transforming the price into the carrier of socialist production relations? The second question is: on the level of phenomena, how is this production relation realized in the process of price formation, and how does it transform value into price with consistent method of determination that is adequate for socialism. Our literature has not answered these questions. This leads to the following paradox. On the one hand, during the entire course of study of this problem the thesis that the basis of the price should express socialist production relations has been present in one form or another. On the other hand, the basis of socialist prices is frequently substantiated by circumstances that do not reflect socialist production relations and therefore cannot give prices stable definitions that are specific to socialism. This refers in particular to the idea of calculated SNLE touched on above. While substantiating calculated SNLE by differentiation of labor productivity and the use characteristics of the output, which cannot express socialist production relations, the author of this idea nonetheless asserts that "this modification of value expresses the socially necessary expenditures for the production of different types of output that correspond to socialist production relations."[7] So it turns out that mere words are sufficient to transform calculated SNLE into a category that expresses socialist production relations.

The answers to the two questions posed above should be sought chiefly by relying on K. Marx's theory of the price of production. K. Marx linked the transformation of value into production price with the transformation of ownership of the means of production into capitalist ownership and with the origin of industrial capital, which is the fundamental production relation of bourgeois society. At the level of phenomena capital realizes itself in the form of competition, which gives prices a consistent method of definition that is specific to capitalism and therefore makes them an expression of capitalist production relations. The origin of the price of capitalist production illustrates that in the process of historical development change in the form of the price basis is linked to changes in the principal production relation. In chapter 10 of the third volume of "Das Kapital," explaining the origin of the price of production through industrial capital, K. Marx considers an example with the opposite social conditions, when the workers themselves own the means of production. Under such conditions, as he showed, the price of production would not regulate consistent proportions of commodity exchange because for the workers different profit norms are "a matter of indifference." The workers would sell their goods at prices equal to cost (value). "This," wrote K. Marx, "applies to those social orders where the means of production belong to the worker."[8]

Therefore, making the basis of prices dependent on the form of ownership of the means of production, K. Marx comes to the conclusion that the form of the price basis is determined by the principal production relation of the corresponding socioeconomic formation. It follows from this that the form of the basis of socialist prices should be derived from analysis of the principal production relation of socialism, that is, public ownership of the means of production in the form of state (all-people's) ownership.

If we rely on this, the first question that arises is: what characteristics do commodity relationships and the prices that facilitate them take on under the influence of socialist ownership? In answering this question we must consider the actual fact that socialist commodity relationships appear in two forms. The first is commodity relationships among particular enterprises, while the second is between society represented by the state and individual employees. In the first case the exchange of goods is done at wholesale and similar prices (state purchase, estimated, tariffs for freight shipping), while in the second case it is done at retail prices and rate schedules for personal services. Different features of socialist ownership are realized within the framework of each form of commodity relations. Therefore, the question of what lies at the basis of socialist prices should be considered separately for each form of commodity relationships.

With respect to the first form we should stipulate that relations among individual enterprises are in one case relations among state enterprises and in the other relations between state enterprises and kolkhozes.

As the subjects of commodity relations state enterprises are juxtaposed to one another not simply as collective producers of the commodity, but also as cost accounting producers. Only by transforming individual enterprises into cost accounting enterprises does socialist ownership realize its internally inherent features in commodity relations. Cost accounting puts enterprises in those social conditions in which they claim reimbursement of socially necessary prime cost of the commodity, which appears in the form of normative prime costs, and receipt of socially necessary profit, which assumes the form of normative profit. The price which corresponds to these conditions is the price of socialist production (PSP).

The formation of socialist prices at the PSP level is an insuperable, stable determination. This means that socialist prices are not determined with consistent necessity in accordance with the value of the commodity, but rather constantly deviate from it in such an amount that cost accounting enterprises are reimbursed for normative prime cost and receive normative profit. This consistent method of price formation is a specific product of socialist ownership. Under capitalism capital affected prices differently: "Capital regulates average prices regardless of the value of the particular product, goods are exchanged not according to their value but so that 'one application of capital is as profitable as others.'"[9]

The establishment of socialist prices on the PSP basis cannot be interpreted as divorcing them from value or a violation of the law of value. A correct understanding of this method of determining socialist prices presupposes the need to distinguish the immediate basis of actual prices and their ultimate basis. According to Marxist theory the immediate basis of actual prices is that value to which they are constantly drawn and with which their temporary (random) deviations are correlated. In some social conditions (for example in simple commodity production) the immediate basis of market prices is actual value, while in others (for example with capitalism) it is transformed value. The immediate basis of actual prices is a stable method of determining them, a rule that governs the formation of their level. Therefore, it is not accidental that K. Marx speaks of the transformation under capitalism of the law of value into the law of the production price.

But regardless of what is the immediate basis of actual prices, whether it is actual or transformed value, and therefore regardless of the level at which actual prices are consistently formed in comparison with value, their ultimate basis is value. This is illustrated by the following two circumstances: first — the sum of actual prices for social production as a whole is equal to the value of the gross social commodity; second — increase or decrease in the value of the commodity inevitably tends to force actual prices to increase or decrease because their movement is determined by change in value. "No matter how the prices of various commodities are initially set and regulated relative to one another, their movement is subordinate to the law of value," K. Marx wrote. "When the working time necessary to produce a commodity decreases, prices also drop; when it increases, prices rise where other conditions are equal."[10]

The conclusion that the ultimate basis of actual prices is value applies equally to all historical forms of society. Therefore, there is no problem on this issue for the theory of socialist price formation. As for the immediate basis of actual prices, it differs in different historical conditions. In conformity with our conclusion, the immediate basis of socialist prices is the PSP (price of socialist production).

Because cost accounting is the factor that transforms value into PSP, it is clear that normative profit, which is an element of this price, also arises from cost accounting. This conclusion does not change anything in the general proposition that the value of surplus product is created only by surplus labor. Cost accounting does not create profit; it serves as a factor that transforms the corresponding part of the value of surplus products into profit. In other words, cost accounting is the cause of profit only as a production relation that compels society at the level of the enterprises of each sector to single out the socially necessary part of net income.

The cost accounting nature of profit also determines the nature of its intersectorial distribution through the price mechanism. During this process profit does not act as an object of collective acquisition (although this does take place partially). While operating as a form of distribution of newly created value, in the expression of K. Marx it "is at the same time a form of production, a production condition, and an essential component element of the production process."[11] As a form of socialist production profit serves as the source of those social functions which the cost accounting enterprises of each individual sector of production are expected to perform. Therefore, the proportions of its intersectorial distribution through prices can only be determined by the content of these functions. Normative profit corresponds to the normative character of these functions. As for the level of that profitability which follows from normative profit, it does not have a value in principle. In short, under socialism there is no law of average profit norm.

It should be considered that the PSP is a planned norm of expenditures and profitability. The latter means that the process of transforming value under socialism takes place in two stages: (1) transformation of value into planned value which deviates from value to the extent that planned expenditures considered in the price do not coincide with actual expenditures; (2) transformation of planned value in the PSP whose formation presupposes further deviation of prices from value.[12] The planned-normative character of PSP results from the fact that the price basis in socialist society does not take shape spontaneously, but rather is a consciously set internal norm of actual prices, "as a law attained by collective reasoning and therefore subject to it."[13] The advantage of socialist society is that it brings the formation of the price basis under its own control whereas in spontaneous price formation the price basis dominates society as a blind force. In other words, the PSP is an instrument of social planning distribution of working time "among different labor functions and different needs,"[14] and is applicable in the sphere of commodity exchange.

When state enterprises enter commodity relations with kolkhozes, the kolkhozes are juxtaposed to them as collective owners of the means of production (except for the land), which also means collective owners of their goods. If we proceed from this circumstance alone, we are led to the conclusion that the kolkhozes in the process of selling their goods to the state must claim to realize their actual value. But such exchange would not reflect the full character of the social relations in which kolkhozes exist. They are not pitted against socialist society; they are collective members of it. After all, they are not only collective owners, but also co-participants in all-people's ownership. Therefore, in addition to their collective interests they also have the interests characteristic of all members of society: maintaining national governmental agencies, defense, science, art, and the like. The state is the expression of these all-people's interests. For this reason it claims part of the net income created by kolkhoz workers.

But what part of net income must the kolkhozes turn over to the state? Because the kolkhozes, like socialist enterprises generally, function in cost accounting conditions, their normal reproduction can only be insured by that price which reimburses the socially necessary prime cost of output and insures that they receive socially necessary profit. The price formed in this way is the PSP. It is a stable determination of the level of state purchase prices, which means it lies at their basis. Despite the fact that the correspondence between state purchase prices and the PSP may sometimes be violated, the tendency for kolkhoz production to develop in conformity with social needs inevitably draws state purchase prices toward this measure. It follows from this that the kolkhozes can give the state that part of net income which is equal to the surplus of actual value of the item over PSP.[15]

At first glance it may seem that exchange among enterprises of the state sector or between state enterprises and kolkhozes on the basis of prices equal to PSP is not equivalent. But this is not the case. For subjects of commodity exchange it is not the actual value of the good that is equivalent, but that value in monetary form which accounts for their share according to relations that exist among them in the production process. The relationship that they bear to one another in the production process determines how the relations between them at the exchange level must necessarily take shape. The amount of value which exchange necessarily delivers to the subjects of commodity production in conformity with their share in its distribution is, on the one hand, a result of existing social relations and, on the other hand, a precondition for their reproduction. Therefore, what is equivalent is the exchange that insures reproduction of its participants according to those social relations in which the process of historical development has put them. Because reproduction of social relations is accomplished through reproduction of products, equivalent exchange is exchange that insures reproduction of the commodity under the social relations in which it is produced. "The equivalent," K. Marx wrote, "expresses the condition of reproduction of products as a condition given to them from exchange, that is, it expresses the possibility of renewal of production activity as posed by its own product."[16]

The historical character of the principle of equivalency means that with certain production relations exchange carried out on the basis of prices equal to actual value may be equivalent, while with other relations it may be transformed value which deviates from actual value by a special historical method in time. This applies equally to the PSP. It insures the precondition for reproduction of socialist enterprises with those social relations in which cost accounting has put them. The PSP insures equivalent exchange among socialist enterprises under the following conditions: in the first place, socially necessary material expenditures for production of goods are reimbursed to state enterprises and kolkhozes; in the second place, personal reproduction of the workers of state enterprises and kolkhoz members is insured at the socially necessary level, that is, in accordance with the labor contribution to the creation of social product ; in the third place, the enterprises of both social forms are insured the amount of profit necessary to carry on expanded reproduction in accordance with social needs.

The features of socialist ownership realized within the second form of commodity relations are completely different. The distinctive trait of this form is that its subjects are the state and individual members of society, who are at the same time the subject of the fundamental production relation. In this capacity they enter the corresponding relations of distribution of consumption objects. This circumstance has a corresponding effect on commodity relations between society and its individual members as well, and this means also on the prices at which exchange of consumption objects for personal monetary income is carried on.

At what price is the exchange of consumption objects for personal monetary income equivalent, and at what price does it insure normal reproduction of its subjects? It is easy to observe that this exchange is only half commodity exchange because it relates to one of its phases: commodity — money or money — commodity. In it only one subject, the state, claims realization of value. But what amount of value does it demand?

To answer this question we cannot approach the socialist state from the standpoint of private exchange. The socialist state is not a private owner of particular types of consumption objects, but rather the one social owner of all consumption objects (with minor exceptions). For this reason the price of particular types of consumption objects cannot be the price that insures its reproduction. The sum of the prices of all consumption objects plays this role. Because the state is the owner of all consumption objects and at the same time their manufacturer, it claims to realize their true value. Only prices that are equal to value can insure normal reproduction of the state in that social definition which it enjoys under socialism. Therefore, actual value lies at the basis of the price of all consumption objects.

However, even though this conclusion may be correct it is inadequate to answer the question of what lies at the basis of the price of individual types of consumption objects. After all, there is no necessity for the value basis of the price for all consumption objects to be observed in order that prices for particular types may be equal to true value. The price of all consumption objects can also be equal to true value when prices for particular types deviate from true value but these deviations are mutually balanced for all the objects in question. Thus, the answer to the question of the price basis for particular types of consumption objects can be that it originates from the conditions of reproduction of the particular members of society. Because they claim the use value of the objects of consumption, the question arises: precisely what is its quality or, the same thing, what definition does demand assume under socialism?

Socialist demand assumes different definitions relative to individual groups of consumption objects. This depends on their social significance, on the role which they are expected to play in the reproduction of members of socialist society. What is common in the quantitative definition of demand for commodities in each group is that it is not formed randomly, but rather is consciously regulated by the socialist state in conformity with the conditions of society's development.

Thus, demand under socialism is not demand in general. Under the influence of socialist ownership it takes on adequate features of its own. This has a corresponding influence on prices. To the extent that distribution of commodities must be carried on in conformity with demand value is transformed into price in its socialist definition. The price that insures a distribution of consumption objects adequate to socialism can be called the price of socialist distribution (PSD).

The quantitative definition of the price of socialist distribution follows from its qualitative definition. The method of establishing it is governed by the need to insure that individual buyers have the value prerequisites for satisfying plan-regulated demand for particular types of commodities in accordance with their social significance. In other words, PSD is formed independently of the value of the commodity, in such a way that the demand specific to socialism can be met. In the words of N. T. Glushkov, the socialist price is a "norm that shapes personal consumer demand for essential goods and services."[17]

As for the structure of PSD, it is determined by the number of cost accounting elements that participate in the production and circulation of goods and the sums of PSP which reimburse the expenditures of each element and insure it normative profit. The positive difference between PSD and the sum of the indicated PSP's is net income in the form of the turnover tax; a negative difference necessitates use of a state subsidy.

Thus, under socialism there are two price bases in the form of transformed value. The PSP is the basis of wholesale and similar prices (state purchase and estimate prices, rate schedules for freight shipping), and the PSD is the basis of retail prices and rate schedules for personal services. The fact that there are two price bases under socialization is not a distinctive characteristic of it. It follows from the research done by K. Marx in "Das Kapital" that there were three price bases under premonopoly capitalism: the production price in manufacturing industry, the market value in sectors that exploit nature, and true value for the commodity of "labor force."

The conclusion that socialist prices are based on PSP and PSD is not a recommendation aimed at a revision of actually existing price formation practices, but rather a scientific expression of this practice in its internal necessities. After all, the price basis is an objective category. It is realized in the decisions of planned price formation bodies and regulates actual prices regardless of our consciousness. Therefore, the true basis of socialist prices cannot be substantitated artificially, ignoring actual practice.

FOOTNOTES

1. "Nauchnyye Osnovy Planovogo Tsenoobrazovaniya" [Scientific Foundations of Planned Price Formation], Moscow, "Nauka", 1968, p 126.

2. For example, see A. A. Deryabin, "Tseny i Potrebitel'skiye Svoystva Predmetov Truda" [Prices and Use Characteristics of Objects of Labor], Moscow, "Nauka", 1973, pp 60-63; V. Ye. Manevich, "Razvitiye Teorii Planovogo Tsenoobrazovaniya v Sovetskoy Ekonomicheskoy Literature" [The Development of the Theory of Planned Price Formation in Soviet Economic Literature], Moscow, "Nauka", 1975, pp 156-158; R. Otsatson, "Socially Necessary Labor Expenditures and Price Formation Norms," VOPROSY EKONOMIKI No 11, 1979, pp 111-112; A. Savchenko, "Factors That Modify Value and Intersectorial Differentiation of Labor Productivity," EKONOMIKA SOVETSKOY UKRAINY No 12, 1976, pp 25-34.

3. A criticism of the factors that form the basis of the idea of calculated SNLE is given by the author in the article "Factors That Modify Value and Intersectorial Differentiation of Labor Productivity," EKONOMIKA SOVETSKOY UKRAINY No 12, 1976, pp 25-34.

4. K. Marx and F. Engels, "Soch." [Works], vol 25, part 1, p 313.

5. This issue is analyzed in detail by the author in his article "The Question of the Basis of Prices Under Socialism," EKONOMICHESKIYE NAUKI No 8, 1980, pp 44-51.

6. Marx and Engels, op. cit., vol 26, part 2, p 230.

7. "Nauchnyye Osnovy ...," op. cit., p 51.

8. Marx and Engels, op. cit., vol 25, part 1, p 194.

9. Ibid., vol 26, part 3, p 342.

10. Ibid., vol 25, part 1, p 194.

11. Ibid., vol 26, part 3, p 81.

12. The process of transformation of value into the price of capitalist production has an analogous character: value → market value → price of production.

13. Marx and Engels, op. cit., vol 25, part 1, p 282.

14. Ibid., vol 23, p 89.

15. This part of net income is acquired by the state in the form of the turnover tax realized through retail prices. The state share of net income is partially taken from the kolkhozes in the form of the income tax.

16. Marx and Engels, op. cit., vol 46, part 2, p 113.

17. N. T. Glushkov, "The Economic Mechanism and the Practice of Planned Price Formation," KOMMUNIST No 8, 1980, p 46.

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